MEDITIME

A Medical Bulletin from TIME Pharmaceuticals (P.) Ltd.

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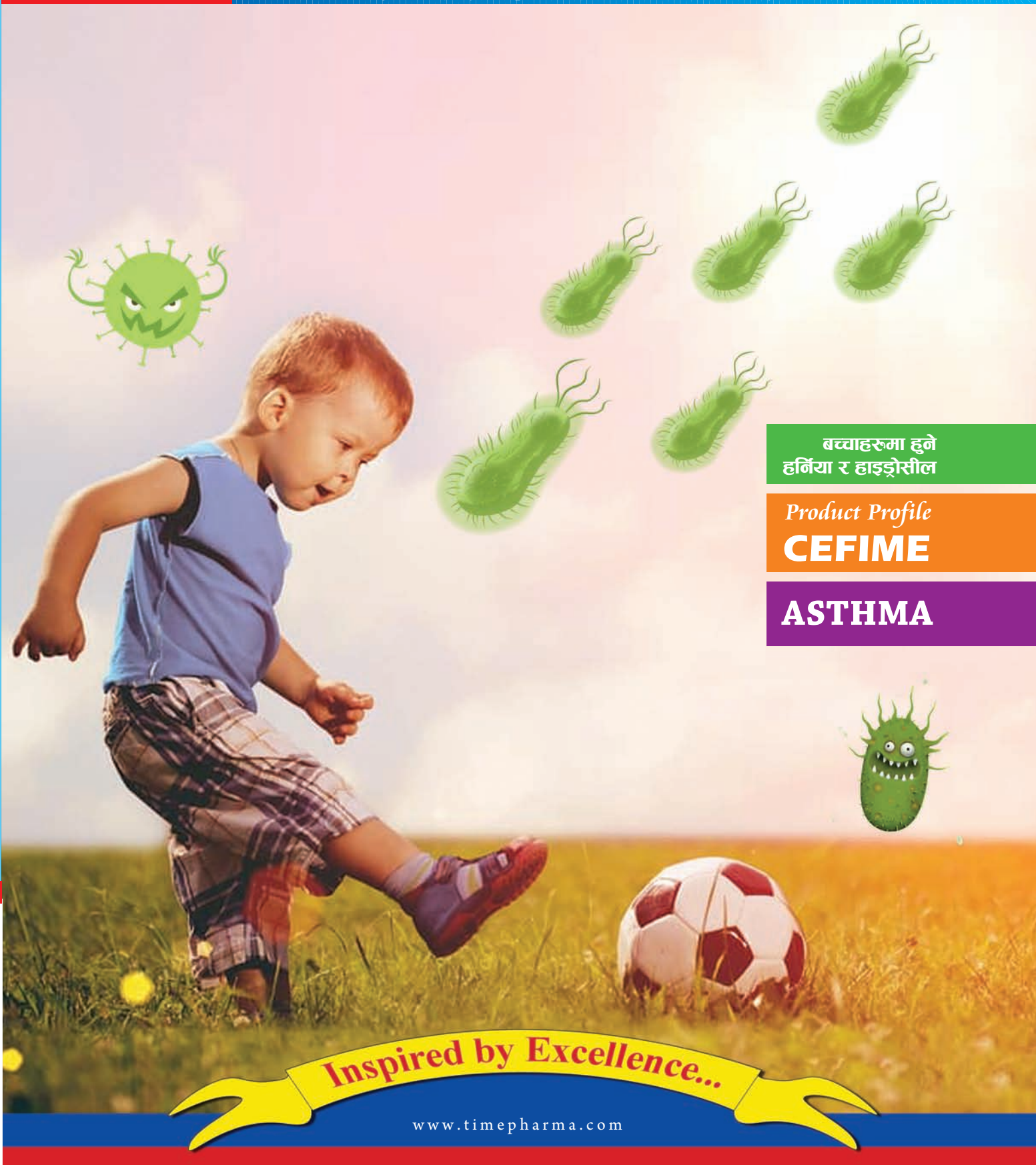

बच्चाहरूमा हुने
हर्निया र हाइड्रोसील

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MEDITIME

A Medical Bulletin from TIME Pharmaceuticals (P.) Ltd.

Inside

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Editorial

Children represent the future, and ensuring their healthy growth and development ought to be a prime concern of all societies.

As per one of the study conducted in Nepal, 54 children per thousands live births die before their fifth birthday, the leading causes of which include pneumonia, diarrhea, measles, malaria and malnutrition. Acute respiratory infections, diarrhea and fever are very common in children below the age of five. All children suffer from these illnesses several times each year. Most parents know the basics of keeping children healthy, like offering them healthy foods, making sure they get enough sleep and exercise and ensuring their safety. Beside this, it is also very important for children to get regular checkups with their health care provider to check child's development or prevent problems.

Infectious communicable diseases are rampant in Nepal. Many Nepalese children die from preventable diseases like diarrhea, and/or dysentery and acute respiratory infections. Water quality issues in Nepal have led to various diseases such as cholera, typhoid fever and hepatitis A. Cholera outbreaks typically occur during the rainy summer season, and the mortality rate for severe cholera can increase to 50% if left untreated. Intestinal parasites also constitute one of the major public health problems. About 60% of Nepalese are infected with one or more species of parasites; in some rural areas, this rate can be as high as 90% of people infected. Also, Vector-borne illnesses such as malaria, leishmaniasis and Japanese encephalitis are endemic in the terai region.

Among the infection in childhood, viral infections are also common. Most childhood viral infections are not serious and include such diverse illnesses as colds with a sore throat, vomiting, diarrhea and fever with rash. Many viral infections are so distinctive that a doctor can diagnose them based on their symptoms. The timely diagnosis and the treatment of viral disease in children prevents from the detrimental effect.

We are supported with different articles in this issue related to child health as well as other important topics. We feel much honored to share the information from our valued doctors with our readers. I thankfully acknowledge all medical fraternities for your continuous support to our MEDITIME and wish similar support with valuable feedback and suggestion for improvement in it.

With Best Regards,

Sudarshan Lal Shrestha
Editor in Chief

e-bulletin can also be viewed in www.timepharma.com

Health News Line

Obsession with Healthy Eating May Make You Sick

Here's an alarming news for people who are increasingly switching to healthy eating in order to lose weight! An obsession with consuming nutritious food may end up putting your health in jeopardy, warns a psychologist. A number of studies in the past have stressed upon the healthy side of eating clean, nutritious food. But the latest piece of information making rounds on the internet casts doubt on this widespread notion, suggesting instead the practice of eating healthy can actually have catastrophic effects on human health. Patrick Denoux, a professor in intercultural psychology at the University of Toulouse-Jean Jaures, believes that obsessively following a pure vegetarian diet can lead to B12 deficiency, which further can lead to numerous other health problems.

Vitamin B12 is essential for good health. Unfortunately, this vital vitamin is not produced by our body and we need to get the required nutrient from animal products like eggs, dairy products, meat or fish. People who are pure vegetarian, eating only a vegan diet and abstaining from gluten, dairy products, meat and fish, refined sugar, and processed foods, may not be getting enough of Vitamin B12. This deficiency of vitamin B12 can lead to a number of medical conditions such as vision loss, weakness, heart palpitation, nerve problems, tiredness and lightheadedness, depression and memory loss.

Now experts believe an obsession with healthy eating could lead to orthorexia nervosa- an eating disorder characterized by an excessive obsession with eating healthy food. A person suffering from orthorexia is "imprisoned by a range of rules which they impose on themselves," Paris nutritionist Sophie Ortega said. One example of obsessive clean eating, she found in a client who gave herself a vitamin B12 deficiency due to which she was going blind. The patient even refused to take the supplements. "It was as if she preferred to lose her sight, rather than betray her commitment to animals," she said.

"We are living through a time of change in our food culture, which has led us to a fundamental doubt of what we are eating," said Denoux. Health experts maintain that people suffering with this eating disorder could be treated with cognitive behavioural therapy, which may involve learning on how to deal with situations that can lead to anxiety about eating, relaxation techniques and discussing beliefs about eating habits. It is important to mention here that, Orthorexia nervosa is not a part of the Diagnostic and Statistical Manual of Mental Disorders, set down by the US mental health professionals. "The term orthorexia was proposed as a commonly used term but it is not medically recognised," said Pierre Dechelotte, head of nutrition at Rouen University Hospital in northern France.

Energy Drinks May Cause Brain Hemorrhage

Energy drinks may be very popular among people across the world but they have lately gained a bad reputation among health experts. Some ingredients in energy drinks, including caffeine and sweeteners, have been shown to cause potentially serious adverse effects. In previous studies, excessive consumption of energy drinks has been associated with serious medical conditions like seizures, mania, stroke, as well as problems with heart and blood vessels and even sudden death. Energy drinks contain certain stimulant drugs, mainly caffeine, which are advertised as energy boosters, stimulating mental and physical alertness. The younger generation is mainly attracted to these sugar laden caffeinated beverages. Making an important addition to the list of its negative health consequences, doctors have warned that energy drinks may cause brain hemorrhage.

This news came after a post went viral on Facebook page describing the story of a man whose excessive energy drink consumption left him with a hole in his skull. The unproven Facebook post was uploaded by the man's wife who wrote doctors have screened her husband for alcohol and drugs, but ruled them out as the cause for the hemorrhage. They were then able to conclude that he suffered a brain haemorrhage due to excessive energy drink consumption.

However, the post was subsequently deleted and it was not verified whether the details were accurate or not. At the same time, the NIH data shows that the number of emergency room visits pertaining to energy drink consumption doubled between 2007 and 2011, especially among people of 40 years of age. As per the health agency, energy drinks can be health-hazardous because large amounts of caffeine in them may lead to "serious heart rhythm, blood flow and blood pressure problems". These caffeinated beverages can also interfere with sleep patterns, trigger heart palpitations and anxiety, cause digestive problems, increase blood pressure and lead to dehydration, the NIH warned.

Researchers with the American Heart Association (AHA) had warned that energy drinks can put one's life in danger. These drinks are especially life-threatening for people who already have blood pressure or cardiac issues, it warned. But do not dishearten, you can still stay energized without consuming an energy drink. There are natural energy boosters that keep you energised without causing harmful effect. Coconut water, lime water, Kokum energy drink, banana smoothie and green tea are some natural energy drinks that not only give you energy but also provide you with a pack of important nutrients.

Feeding Eggs, Peanuts to Infants Early Cuts Their Future Risk of Food Allergy

Parents, take note! Start feeding your newborns with cow's milk products, eggs and peanuts early. After Canadian researchers have found that delaying the introduction of potential allergy-causing foods to babies could increase their risk for a food allergy later on. According to new findings from the Canadian Healthy Infant Longitudinal Development (CHILD) Study, parents who do not introduce their newborns to potentially allergenic foods until after the baby's first year may put them at an increased risk of developing wheezing, asthma and eczema in late childhood stage.

"Food sensitisation early in life is associated with an increased risk of wheeze, asthma, eczema and allergic rhinitis in later childhood," said Dr Malcolm Sears, co-director of the CHILD Study and a professor of medicine at McMaster University in Ontario. "While not all food-sensitised infants become food allergic, sensitisation is an important step on the pathway," he added. To reach their findings, the Canadian team of researchers working on the CHILD Study used data from more than 2,100 children in Canada. After assessing the data, the team found that infants who were not fed with cow's milk products in their first year were nearly four times as likely to become sensitive to milk food items at age one compared to their peers who were fed cow's milk products before 12 months of age.

Likewise, infants who were not introduced to egg or peanut in their first year were nearly twice more likely to be sensitized to those foods compared than infants who ate them before 12 months of age. "Early introduction of eggs before one year of age seemed to be especially beneficial, as it significantly reduced the odds of developing sensitization to any of the three food allergens," said the study's first author, Maxwell Tran, who is a BHSc graduate from McMaster University and an AllerGen trainee.

"To our knowledge, this is the first observational study in a general population of infants to report on how the timing of introduction of multiple foods affects the risk of developing a food allergy. The researchers also discovered that most parents in Canada delay the introduction of potentially allergenic foods, especially egg and peanut, to their kids. The findings showed that only three percent of parents introduced egg to their infants before six months of age, while mere one percent of parents introduced peanut to their babies before six months of age. Furthermore, 63 percent of parents avoided feeding peanut to their infants entirely during the first year of life. "This is an important shift in thinking away from avoidance of potentially allergenic foods, toward their early introduction to reduce the risk of food allergy later on," said Mr. Tran.

बच्चाहरूमा हुने हर्निया र हाइड्रोसील : एक चिनारी

डा. मनोज कृष्ण श्रेष्ठ
मोडेल अस्पताल
बरिष्ठ बाल सर्जन

हर्निया र हाइड्रोसील के हो ?

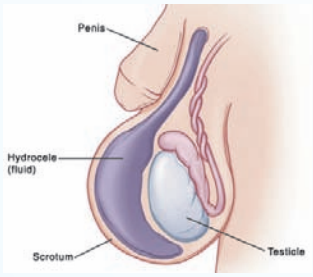
शरीरमा भएका प्राकृतिक छिद्रबाट वा कमजोर भित्ताबाट शरीरभित्रका अँग (viscera) बाहिर निस्कनुलाई हर्निया भनिन्छ । हुन त हर्निया शरीरको विभिन्न भागहरूमा हुन सक्तछ, तर सबैथरि हर्नियामध्ये पेटको तल्लो भाग-काछ (inguinal regional) र सन्नी (scrotum) मा हुने हर्निया inguinal hernia सबैभन्दा बढी भएकोले साधारण अर्थमा हर्निया भन्नाले यसैलाई बुझाउँदछ ।

हाइड्रोसीलको अर्थ पानी भरेको पोको हो । हाइड्रोसील भन्नाले सन्नीभित्र पानी जमी सन्नी फुल्ने अवस्थालाई बुझाउँदछ।

हर्निया र हाइड्रोसील ३% देखि ५% बच्चाहरूमा देखिन्छ । हर्निया र हाइड्रोसील दायाँ वा बायाँ वा दुबैतिर हुन सक्तछ । दायाँ ६०%, बायाँ २५% र दुबैतिर १५% हुने गर्दछ । हर्निया हुँदा पेटभित्रको आन्द्रा (intestine), बोसो (omentum) र छोरीहरूमा डिम्बबाहिनी नली (fallopion tube), डिम्बाशय (ovary) आदि बाहिर निस्कन्छ भने हाइड्रोसीलमा पेटभित्रको पानी (peritoneal fluid) बाहिर आई सन्नी फुल्न जान्छ।

हर्निया र हाइड्रोसील किन हुन्छ ?

हर्निया र हाइड्रोसील ठूला व्यक्तिमा मात्र हुने नभई साना बच्चाहरूमा पनि हुने गर्दछ । बच्चाहरूमा हुने हर्निया र हाइड्रोसीलको कारण ठूला व्यक्तिहरूमा हुने यिनै रोग भन्दा भिन्न हुन्छ । बच्चाहरूमा यी रोग हुनुको प्रमुख कारण processus vaginalis बन्द नभई खुल्ला रहनु हो ।



हर्निया र हाइड्रोसील कसरी चिन्ने ?

हर्निया र हाइड्रोसीलको पहिचान सहज छ । हर्निया हुँदा काछ वा काछ र सन्नी दुबैतिर फुलेको देखिन्छ। बच्चा रूंदा, खोक्दा, हिंडदा वा पेटमा बल पर्ने कुनै पनि काम गर्दा फुल्दछ भने पल्टिंदा वा सुत्दा हराउँछ । हाइड्रोसील हुँदा सन्नी मात्र फुलेको देखिन्छ, सुत्दा केही सानो हुन सक्छ तर पूरै हराएर जाँदैन । हर्निया र हाइड्रोसील दुवैमा साधारणतया दुखाइ हुँदैन । हर्निया अड्किंदा वा हाइड्रोसील अचानक बढ्दा भने दुखाइ हुन्छ ।

हर्निया र हाइड्रोसीलको जटिलता

हर्नियाबाट हुनसक्ने जटिलताको कारणले गर्दा यो एउटा खराब रोग हो । हर्निया हुँदा आन्द्रा, डिम्ब, डिम्बबाहिनी नली पेटभित्रबाट बाहिर आउने हुँदा कुनै पनि समयमा अड्किने र पेटभित्र फर्किन नसक्ने हुन सक्तछ । यस अवस्थामा फुलेको भाग रातो भई दुख्ने, पेट फुल्ने, पटकपटक बान्ता हुने हुन सक्तछ । शुरूको अवस्थामानै उपचार नभएमा अड्किएको आन्द्रा, डिम्ब, डिम्बबाहिनी नलीमा रक्त संचालन बन्द हुन गई अड्किएको अंग मर्न सक्दछ । यसले बच्चाको ज्यान समेत जोखिममा पार्दछ । एक वर्ष भन्दा मुनिका बच्चाहरूमा बढी जटिलता हुने डर हुन्छ । साथै सानो हर्निया ठूलो हर्निया भन्दा बढी अड्किने डर हुन्छ । तसर्थ हर्नियाको उपचारमा ढिलाइ गर्नु हुंदैन । जटिलता आउनु अगावै समयमा उपचार गराउने तर्फ सचेत हुनु पर्दछ ।

हाइड्रोसील हुंदा पेट भित्रको पानी मात्रै सन्नीमा आउने भएकोले हर्निया जस्तै ज्यानै जोखिम पार्ने जटिलता नभएतापनि खेल्दा, लड्दा चोट लाग्ने, फुट्ने, पाक्ने, मानसिक समस्या हुने हुन सक्तछ ।

हर्निया र हाइड्रोसीलको उपचार

हर्निया र हाइड्रोसील खाने औषधीले मात्र ठीक हुंदैन । आन्द्रा वा पानी आउने बाटो अपरेशन गरेर मात्र बन्द गर्न सकिन्छ । अपरेशन गर्न अस्पताल भर्ना हुनु पर्दैन, अपरेशन सकी २-३ घण्टा आराम गरी घर फर्कन सकिन्छ ।

हर्निया र हाइड्रोसीलको अपरेशन कहिले गर्ने?

हर्निया रोगको जटिलता जुनसुकै समयमा पनि हुन सक्ने भएकोले यो रोग पहिचान भएको जतिसक्दो छिटो उपचार गरेको बुद्धिमानी हुन्छ । यसको लागि उमेरले कुनै असर गर्दैन । भर्खर जन्मेको नवजात शिशुमा पनि हर्निया भएको खण्डमा तुरून्त अपरेशन गरिन्छ ।

हाइड्रोसील भएमा २ वर्षको उमेरसम्म पर्खेर हेरिन्छ । धेरैमा आफै पानी आउने बाटो बन्द हुन सक्छ । २ वर्ष सम्ममा पनि सन्नी फुल्ने रही रहेको अवस्थामा अपरेशन गरी पानी आउने बाटो बन्द गर्नुपर्दछ ।

हर्निया र हाइड्रोसीलसँग सम्बन्धित गलत धारणा

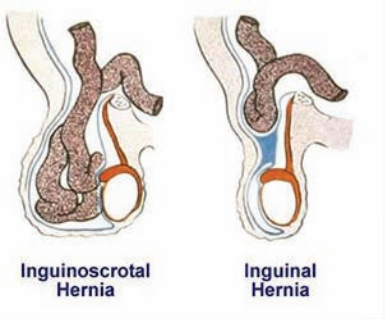
१. हर्निया र हाइड्रोसीलको अपरेशन ५ वर्षको उमेरमा गर्नु पर्छ ।

हर्निया रोगको जटिलताको कारणले गर्दा यो रोग पहिचान भएपछि सकेसम्म छिटो अपरेशन गर्नुपर्दछ । जटिलता पर्खनु बुद्धिमानी होइन । भर्खर जन्मेको शिशुमा पनि हर्निया भएमा तुरून्त उपचार गर्नुपर्दछ । १ वर्ष भन्दा मुनिका बच्चामा हर्नियाको जटिलता अझ बढी हुन्छ ।

हाइड्रोसील अपरेशन २ वर्षसम्म गर्नु आवश्यक पर्दैन कारण यसको ज्यान जोखिममा पार्ने जटिलता छैन, साथै यस समय भित्र पानी आउने बाटो आफै पनि बन्द हुन सक्तछ । २ वर्ष वा सो भन्दा बढी उमेरसम्म देखिएको हाइड्रोसीलको भने अपरेशन गरी पानी आउने बाटो बन्द गर्नुपर्दछ ।

२. हर्निया र हाइड्रोसीलको अपरेशन गर्नाले पछि बच्चा हुंदैन ।

हर्निया र हाइड्रोसीलको अपरेशन गर्दा आन्द्रा वा पानी आउने बाटो बन्द गर्नु अघि अण्डकोषमा जाने रगतको नशा (testicular vessels) र अण्डकोषबाट शुक्रकिट आउने नली (vas difference) कुनैलाई पनि चोट नलाग्नेगरी छुट्याइन्छ र आन्द्रा वा पानी आउने बाटो मात्र काटेर सिलाइन्छ। शुक्रकिट आउने नली काटिएमा, बांधिएमा वा चोट पुगेमा पछि त्यतातिरबाट शुक्रकिट आउन सक्दैन । दुवैतिरको हर्निया र हाइड्रोसीलको अपरेशन गर्दा दुवैतिरको शुक्रकिट आउने नलीमा समस्या भएमा पछि बच्चा नहुने हुन सक्दछ । तर अपरेशन गर्दा यही कुरामा विशेष ध्यान पुर्याइने भएकोले यो समस्या अत्यन्त न्यून हुन्छ ।



३. अपरेशन जाडो समयमा गरे घाउ पाक्दैन ।

घाउ पाक्नुको कारण आँखाले नदेखिने सूक्ष्म किटाणु (bacteria) को संक्रमण हो । अपरेशनको प्रकार, बच्चाको स्वास्थ्य र पोषणको अवस्था, अपरेशनमा प्रयोग गरिने औजारहरूको निर्मुलिकरण (sterilization), अपरेशन पछिको व्यक्तिगत सरसफाइ आदि सबै कारणले किटाणु संक्रमणमा प्रभाव पार्दछ । साधारणतया हर्निया र हाइड्रोसीलको अपरेशनपछि घाउ पाक्ने समस्या अत्यन्त न्यून (१ प्रतिशत भन्दा कम) हुन्छ।

४. सानोमा अपरेशन गरे घाउ धेरै दुख्छ ।

घाउ सबैलाई दुख्छ साना हुन् वा ठूला । सहनशक्तिको आधारमा त्यत्तिकै गहिराइको घाउ कसैलाई बढी दुख्ने हुन्छ त कसैलाई कम । मांशपेशी (muscle), हाड्को बाहिरी आवरण (periosteum) काटिएको घाउ बढी र लामो समय दुख्ने हुन्छ । हर्निया र हाइड्रोसील अपरेशनमा सानो छाला मात्र काटे पुग्ने भएकोले दुखाइ कम हुन्छ र छोटो समयको लागि मात्र हुन्छ ।

An Unusual Case Of Ovarian Fibroma With Increased CA-125 With Carcinoma Cervix: Rare Combination Case Report

Dr. Anu Bajracharya
MBBS, MD
Gynae-oncologist

An Introduction:

Ovarian fibroma comprised of 1-4% of all ovarian neoplasm[1]. Elevated serum CA-125 levels in postmenopausal women with solid adnexal masses with ascites are highly suggestive of malignant ovarian tumour[2].This is a rare case report of ovarian fibroma with elevated CA-125 with combination of carcinoma cervix Stage IIA1.

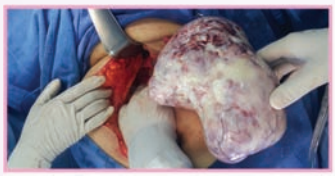
Case presentation:

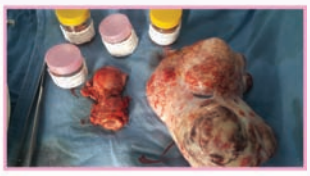
A 56 year postmenopausal lady, with co-morbidities of Hypertension and Diabetes presented in our institution with history of abdominal distension and post menopausal bleeding 3 episodes slight in amount. Per abdomen revealed huge abdomino-pelvic mass about 18cmX12cm in size, hard in consistency, mobile from side to side however lower border could not be felt with moderate ascites. Per vaginal and speculum examination showed carcinoma cervix stage IIA1. Cervical biopsy: squamous cell carcinoma, non keratinizing.

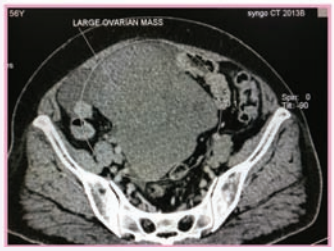
CT whole abdomen: Large abdomino-pelvic mass separate from the uterus about 14.3X15.7X12.8cm.Multiple enlarged pelvic lynphadenopathies with moderate ascites.CA-125:1236 ì/ml. Clinical findings suggestive of synchronous carcinoma of cervix and ovarian carcinoma. Ascitic fluid cytology: Negative for malignant cells. Trucut biopsy from mass: spindle cell neoplasm. Tumour board discussion done in view of high CA-125 and possibility of underlying secondary malignancy? CA Ovary and as patient was not fit for surgery so considered to start Neo-Adjuvant CT covering both Ca Cx and Ca Ovary. After 2 cycles of post NACT, CT scan s/o partial response with stable abdomino-pelvic mass. With these reports surgery done and Intraoperative finding was huge right ovarian tumour, solid in consistency with irregular bosselated surface and was twisted two times. Rt. Salpingo-oophorectomy done and sent for frozen section: Benign. Type III Radical hysterectomy with B/L pelvic lymphadenectomy done.Post operative period was uneventful. HPE of Right ovary: Fibroma. Squamous cell carcinoma cervix with post chemo changes, poorly differentiated ypTIIA1N1. Patient is undergoing adjuvant radiotherapy.

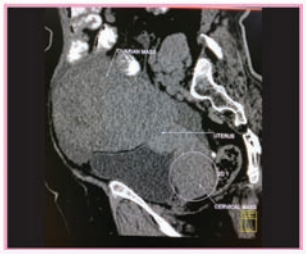
Discussion :

Ovarian fibromas are stromal tumours composed of spindle, oval or round cells producing collagen[3].They are almost always benign, however the degree of mitotic activity is the main parameter for cellular Fibroma from Fibrosarcoma[4]. Usually these tumours are asymptomatic when smaller in size, but larger tumours can cause vague abdominal discomfort to acute abdominal pain when associated with torsion. In this case, patient had come due to pain abdomen and intraoperatively, tumour was twisted two times. The treatment of fibroma is excision, and the prognosis is good. In this case, she had carcinoma of cervix and ovarian fibroma, which is a very rare combination. Girija MK5, had reported a similar case report with ovarian fibroma and carcinoma cervix in the same patient, which is the only case report so far.









Conclusion:

CA-125 as an ovarian carcinoma tumour marker has been suggested as a valuable tool to assist in distinguishing between benign and malignant neoplasms. However, it has not proved to be reliable predictor of ovarian cancer as normal values do not exclude the presence of carcinoma and elevated levels can be associated with benign lesions.

References:

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Adult Sepsis-Microbiological Agents and Antimicrobial Use

Dr. Vijay Kumar Shrivastav
Assistant Professor
Dept. of GP & EM,
BPKIHS, Dharan, Nepal.

Introduction:

Bacteremia and sepsis are associated with an in-hospital fatality rate of 30-40%. In the last two decades, bacterial infections have accounted for a higher percentage of fatality causes. The Surviving Sepsis Campaign recommends initiating broad spectrum antibiotics targeted toward the source of infection within the first hour of recognition of septic shock.

Thus, early and empirical antibiotic treatment (i.e. given before the result of culture are available), in a patient suspected of harbouring a severe bacterial infection, is common wisdom. However, even putting to the best use all the data available within the hours of suspecting an infection, we are still left uncertain as to the pathogen and its susceptibility to antibiotics in the majority of cases. Many patients who have septic shock or severe sepsis remain in the emergency ward (EW) for several hours, the role of the emergency physician in rapidly selecting appropriate antibiotics for administration may be critical in lowering the mortality rate in patients diagnosed with septic shock or severe sepsis.

The goal of the study was to determine whether first line antibiotics selected by emergency physicians effectively covered disease causing organisms in patients presenting to the EW with septic shock or severe sepsis. Some reports, but not all, show a significant reduction in fatality associated with appropriate empirical antibiotic treatment.

Study was carried out at tertiary care centre of eastern Nepal. Patients of 16 years of age presenting in emergency ward with features of sepsis i.e. who met the criteria of SIRS with suspected or definite focus of infection were included in the study.

SIRS: =2 of following.

1. Fever (oral temperature >38°C/100.4°F) or hypothermia (<36°C/96.8°F);
2. Tachypnea (>24 breaths/min) or P_aCO_2 <32mmHg;
3. Tachycardia (heart rate>90 beats/min);
4. Leukocytosis (>12,000/µL), leucopenia (<4,000/µL), or >10% bands; may have a noninfectious etiology.

Sepsis:

1. SIRS that has a proven or suspected microbial etiology.

Severe sepsis:
Sepsis with one or more signs of organ dysfunction

Septic shock:
Sepsis with hypotension (arterial blood pressure <90 mmHg systolic, MAP <65 or 40 mmHg less than patient's normal blood pressure) for at least 1 hr despite adequate fluid resuscitation.

Appropriate antibiotic: It was defined as the isolated bacteria being susceptible to at least one of the antimicrobials empirically administered as the first dose or 24 hours later.

Results:

This cross sectional descriptive study comprised 421 cases. Mean (SD) age of patient at admission was 36±16.9 years with a minimum age of 16 years old and maximum of 84 years. Male to female ratio of the patient was found to be 1:2. According to the stage of severity, 54% had sepsis syndrome, 28% severe sepsis and 18% septic shock. Sources of infection were urinary tract 45.84%, lungs and pleura 17.10%, post operative wound infection 10.68%, sepsis with MODS 7.36%, intra-abdominal 4.98%, others 14.0%.

Fever was the most common (76.2%) presenting complaint in the emergency room. Other complaints were cough (15.7%), pain abdomen (12.4%), discharge from surgical site (10.7%), burning micturition (14%) etc.

Overall culture positivity rate was 33.73% in the specimens of blood, urine, wound swab. Maximum positivity rate was found in wound swab culture where 70% positivity was found. A total of 11 different isolates were identified; *Staphylococcus aureus, Klebsiella pneumoniae, Escherichia coli (E. coli), Acinetobacter spp., Enterococcus faecalis, Citrobacter koseri, Coag. Neg. Staphylococcus, Pseudomonas aeruginosa, Proteus, Pneumococcus, Enterobacter spp. Escherichia coli* was the most common isolates (35.91%). Single empiric antibiotic was used in 59 cases which constituted mainly ceftriaxone and in few ciprofloxacin, norfloxacin, azithromycin, ceftazidime. Two antimicrobial were used in 179 cases, frequently used combinations were ceftriaxone plus cefixime, ceftriaxone plus metronidazole, ceftriaxone plus amikacin, piperacilline-tazobactam plus metronidazole. Similarly three antimicrobial in 121 cases, four antimicrobial in 38 cases and five antimicrobial in 24 cases.

Empiric antibiotic prescription pattern in emergency ward:
Most commonly used antimicrobials empirically were third generation cephalosporin (88%), quinolones (47%), imidazole group (42%) and Piperacilline-tazobactam (30.4%).

Empirical antibiotics used in culture positive cases:
Amikacin was used in 4 cases each of *Staph. aureus* and *K. pneumonae*, and five cases of *Proteus*. Ceftriaxone was used in 24 cases each of *Staph. aureus* and *E. coli*, 10 cases of *K. pneumonae,* 4 cases of *Enterococcus fecalis* and *Pneumococcus*, and 3 cases each of *Pseudomonas* and *Proteus*. Ciprofloxacin was given to 14 cases of *E. coli*, 7 of *Staph. aureus*, 4 cases for each of *Enterococcus fecalis* and Ptoteus, 2 and 1 for *Pseudomonas* and *Enterobacter* respectively. Vancomycin was given in 6 cases of *pseudomonas*, 4 of *Acinetobacter*, 2 each of *Pneumococcus* and *Proteus*, 1 case of *enterobacter*. Similarly Metronidazole was given to 24 cases of *Staph. aureus,* 7 cases of K. *pneumoniae*, 5 cases of *Pseudomonas*, 4 cases for each of *E. coli, Acinetobacter, Enterococcus, Citrobacter* and *CoNS*.

E.coli and *Staph aureus* were common organism identified. *E.coli* was more common in urine and wound swab and *Staph aureus* more common in blood and wound swab. Three culture results had two organisms.

Susceptibility pattern of Antimicrobial agents(AMA) against different microbes:

This study shows very good susceptibility of Amikacin against most of the microbes, 100% for each of *E. coli* and *K. pneumonae*, 86% for *Staph. aureus*, and about 70% for each of *Proteus* and *Pseudomonas*. Ceftriaxone has highest susceptibility for *Staph*. i.e 44%, about 20-30% for *K. pneumonae*, *E. coli*, *Acenetobacter* and *Pneumococcus*. Quinolones (Ciprofloxacin and Ofloxacin) have about 50% susceptibility against *Staph., Enterobacter* and *Pseudomonas*, and 25-30% against *K. pneumonae* and *Acinetobacter*. Nitrofurantoin has 100% susceptibility against *Enterococcus* fecalis and 75% against *Klebsiella* and *E. coli* and 50% against *Staph*. Vancomycin has 100% susceptibility against *Staph*., *Enterococcus* and Pneumococcus. Tigecyclin and Linezolid have 100% susceptibility against *Staph*. and *Enterococcus*. Imipenem has >80% susceptibility against *Staph., Klebsiella, E. coli* and *Pseudomonas*. Meropenem has 100% susceptibility against *Citrobacter* and *Enterobacter,* and 70-80% against *E. coli* and *Pseudomonas*.

Acinetobacter is resistent to most of the antibiotics but susceptible to Cotrimoxazole and Tobramycin. Citrobacter is 100% susceptible to Meropenem and Chloramphenicol. CoNS is 100% susceptible to Amikacin.

Outcome of patient with respect to appropriateness of empirical antibiotic used in culture positive cases:

Appropriate antibiotic was used in 29.6% of cases where mean hospital stay was 6 days with no deaths. Inappropriate antibiotic was used in 70.4% of cases where mean hospital stay was 8.7 days with 17 deaths. So it can be said that there is increasing trend of deaths and increased duration of hospital stay in inappropriate empiric antibiotic patients.

Conclusion:

This study showed sepsis is more common in female (68%). Most common focus of infection being urinary tract (46%) and lungs (17%). Most commonly used empiric antibiotic were ceftriaxone (70%), Imidazole group (42%). Most commonly used empiric combination were α-lactam + Imidazole and β-lactam + Quinolones 17% and 16% respectively. *E.coli* and *Staph*. aureus were most commonly isolated organisms 35% and 32% respectively. Among the tested antibiotics Vancomycin, Tigecycline and Linezolid have almost 100% of susceptibility. Ceftriaxone has about 25-30% susceptibility, Quinolone group has about 40-50% and aminoglycosides group has 85-100% susceptibility. The overall conclusion can be taken as there is high prevalence of multi drug resistant organism which leads to inappropriate empirical antibiotic prescription and associated increased mortality among this group of patient. So local susceptibility pattern of the microorganisms should be reviewed periodically and accordingly protocol for empiric antibiotic prescription should be made in every heath setup for better outcome of patients both in terms of number of deaths and duration of hospital stay.

Product Profile CEFIME

Generic Name : Cefpodoxime Proxetil
Strength : 200mg film coated tablets
Therapeutic Category : 3rd Generation Cephalosporin

Pharmacology

Pharmacodymanics

Cefime binds to one or more of the penicillin-binding proteins (PBPs) which inhibits the final transpeptidation step of peptidoglycan synthesis in bacterial cell wall, thus inhibiting biosynthesis and arresting cell wall assembly resulting in bacterial cell death.

Pharmacokinetics

Absorption:
A prodrug that is absorbed from the gastrointestinal tract and de-esterified to its active metabolite Cefpodoxime. Approximately 50% of the administered Cefpodoxime dose is absorbed systemically

Distribution:
Well distribution in upper and lower respiratory tract tissues, interstitial fluid and inflammatory exudates associated with skin damage, also distributes to tissues and fluids of urinary tract

Metabolism & Elimination:
Protein binding: 22-33% in serum,21-29% in plasma
Route of elimination: 29 to 33% of the administered Cefpodoxime dose is excreted unchanged in the urine in 12 hours.

Half life : 2.1-3.6 hours

Indications

- Respiratory Tract Infections
- Pneumonia
- Bronchitis
- Sinusitis
- Acute Exacerbation of Chronic Bronchitis
- Skin Infections
- Urinary Tract Infections

Dosage

200mg twice daily

Side effect

Common are gastrointesinal side effects(diarrhoea, abdominal pain, nausea), dermatological(rashes, pruritis, urticaria)

Contraindication

Hypersensitivity to cephalosporin

Special Precaution

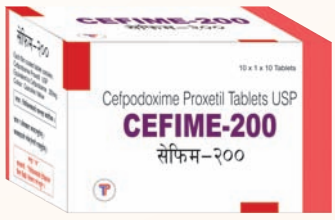
Should be administered with caution to patients receiving concurrent treatment with diuretics

Drug Interaction

Probenecid: As with other beta-lactam antibiotics, renal excretion of Cefpodoxime is inhibited by Probenecid Antacids reduces peak plasma levels and anticholinergic drugs delay peak plasma levels

Pregnancy Category

Category B



ASTHMA

Dr. Reshma Dhakal Lamichhane
Pediatrician
Kanti Children's Hospital

Wheezing in children less than 5 years of age. Is it asthma?

Asthma is a chronic disease of the airways in the lungs. In Asthma airways gets inflamed red, swollen, narrower and very sensitive to irritants. It is characterized by recurrent episodes of coughing, difficulty in breathing, wheezing (a whistling sound in the chest) and sometimes chest tightness. Asthma is the most common chronic disease of childhood. The prevalence of asthma world-over in children is approximately 8-10%. In India the estimates suggest that 10-15% children between 5-11 years have asthma. Though, no study is done yet the prevalence in Nepal is similar.

There are many asthma phenotypes but the most important pnenotype in children are

Allergic asthma: This is the most easily recognized asthma phenotype, which often commences in childhood and is associated with past and or family history of allergic diseases such as eczema, allergic rhinitis, food or drug allergy.

Asthma associated with obesity: Some obese patients with asthma have prominent respiratory features like Asthma flare-ups (also called exacerbations or attacks) may occur, even in people taking asthma treatment. When asthma is uncontrolled, or at a high-risk in patients, these episodes are more frequent and more severe, and may be fatal.

Fortunately, asthma can be effectively treated and most patients can achieve good control over it. When asthma is under good control, patients can:

- Avoid troublesome symptoms during day and night
- Avoid or minimize medication
- Have productive & physically active lives
- Avoid serious asthma flare-ups (exacerbations, or attacks)

Triggers of Asthma:

Allergens, Exercise, Respiratory Infections, Nose and Sinus problems, Drugs and Food Additives, GERD, Emotional Stress. These responses are more likely to occur when asthma is uncontrolled.

Pathophysiology:

1) Bronchospasm which is an Early-Phase Response Peaks 30-60 minutes post exposure, subsides 30-90 minutes later characterized primarily by bronchospasm, Increased mucus secretion, edema formation, and increased amounts of tenacious sputum
2) Airway inflammation which is a Late-Phase Response is characterized primarily by inflammation of Histamine & other mediators that set up self-sustaining cycle increasing airway reactivity causing hyper-responsiveness to allergens and other stimuli. Increased airway resistance leads to air trapping in alveoli and hyperinflation of lungs. Not treating or resolving, may lead to irreversible lung damage

What are the symptoms of asthma in children?

Sudden attacks of coughing, occurs time and again, child wakes up at night with coughing, tightness in chest, "wheezing" a whistling sound chest, noisy chest with fast breathing, difficult breathing and coughing after play or exercise.

Various studies have recognized patterns of wheeze as

1. Episodic viral wheeze (associated with colds, but is absent when the child has no colds)
2. Multiple trigger-wheezes occurring both with colds and also between episodes of cough and colds, during sleep, activities such as laughing and crying.

Asthma in children less than 5 years of age

As per the recent scientific literature we do not label a child under 5 as asthma.

Clinical symptoms:

Wheeze:

- Wheeze, the most common symptom associated with asthma in children under 5 years of age.
- 5 years and younger, has been strictly defined as a continuous high-pitched sound, sometimes with musical quality, emitting from the chest during expiration.
- Wheezing occurs in several different patterns but a wheeze that occurs recurrently, during sleep, or with triggers such as activity, laughing, or crying is consistent with a diagnosis of ASTHMA

Cough

- Cough due to asthma is recurrent and/or persistent, and is usually accompanied by some wheezing episodes and breathing difficulties.
- Nocturnal cough (occurring when the child is asleep) or cough occurring with exercise, laughing, or crying in the absence of an apparent respiratory infection, strongly supports a diagnosis of asthma.
- The common cold and other respiratory illnesses are also associated with cough.

Breathlessness:

- Breathlessness : that occurs during exercise
- recurrent : increases the likelihood of the presentation being due to asthma.
- In infants and toddlers, crying and laughing are an exercise equivalent.

Reduced activity

- Not running, not playing, not laughing and tired easily

Past or family history

- History of atopic dermatitis, allergic rhinitis, family history of asthma in first degree relatives.

Clinical history

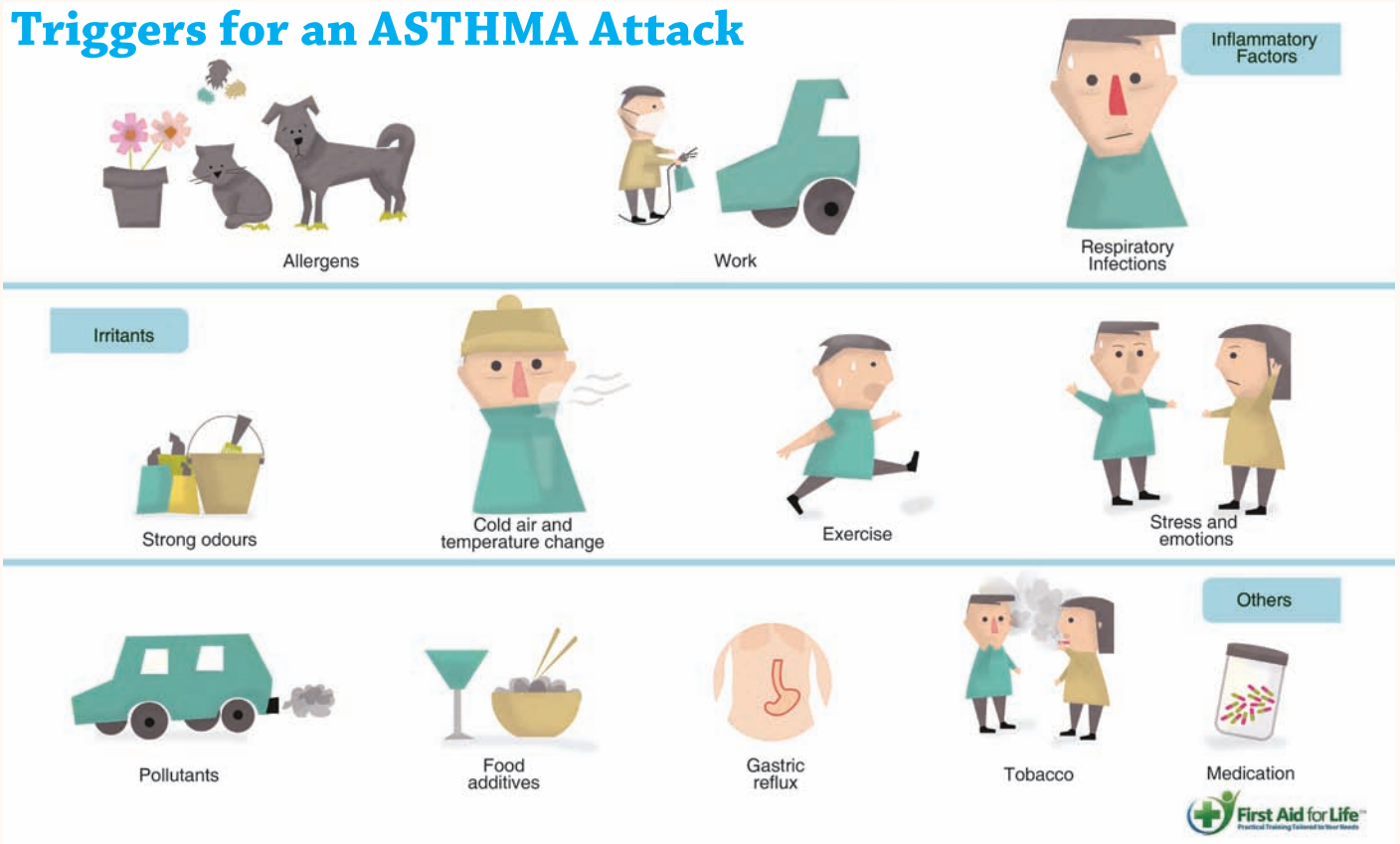
For childrens of 5 years and younger with a history of recurrent respiratory symptoms; a strong family history of asthma in first degree relatives (especially the mother); and/or atopy presenting as atopic dermatitis, food allergy, and/or allergic rhinitis also make a diagnosis of asthma more likely.

Tests for diagnosis and monitoring

While no tests diagnose asthma with certainty in young children, the following may be considered as useful adjuncts in making a diagnostic decision.

Therapeutic Trial: A trial of treatment with short-acting bronchodilators and inhaled glucocorticosteroids for at least 8 to 12 weeks may provide some guidance as to the presence of asthma. These interventions should be evaluated in terms of how they affect control of daytime and nocturnal symptoms as well as the frequency of

Triggers for an ASTHMA Attack



exacerbations requiring increasing doses of inhaled or systemic glucocorticosteroids. Marked clinical improvement during the treatment and deterioration when it is stopped supports a diagnosis of asthma. Due to the variable nature of asthma in young children, a therapeutic trial may need to be repeated more than once in order to be certain of the diagnosis.

Differential diagnosis

- Bronchiolitis
- Tuberculosis
- Congenital heart disease
- Cystic fibrosis
- Immune deficiency
- Viral induced wheezing
- Hyper reactive disease
- Pertussis
- Gastro esophageal reflux
- Broncho pulmonary dysplasia
- Laryngotracheomalacia
- Primary ciliary dyskinesia
- Foreign body aspiration
- Rhinitis
- Postnasal drip
- Habitual

Check List for history:

- Does the patient have a troublesome cough, worse particularly at night, or on awakening?
- Does the patient cough after physical activity?
- Do the patient's colds 'go to the chest' or take more than 10 days to resolve?
- Does the patient have breathing problems during a particular season (or change of season)
- Does the patient use any medication (e.g. bronchodilator) when symptoms occur? Is there a response?

ASTHMA : Recognize the signs of an attack in your child

1. Complaints of chest pain
2. Wheezing or coughing
3. Irregular or rapid breathing
4. Retractions below the ribs or collarbone
5. Pale or clammy skin

Winner of MEDITIME 25th Issue Brain Teaser

Congratulations

- ***Dr. T.L. Upadhaya*** Endocrionologist, Pokhara
- ***Dr. Bijay Shrestha*** Dermatologist, Kathmandu
- ***Dr. Keshav Acharya*** Cardiologist, Narayangarh
- ***Dr. Ranjita Jaiswal*** Gynaecologist, Saptarishi Hospital
- ***Dr. Soni Subedi*** Dentist, Narayangarh
- ***Dr. Niraj K.C.*** ENT, Pokhara
- ***Dr. Kumar Rokka*** MBBS, MD, Kathmandu
- ***Dr. Kalamuddin Khan*** Asst. Uro-specialist, Biratnagar

नेपालमा सर्पदंश र प्रतिविषको सान्दर्भिकता

छविलाल थापा
मेडिकल डाइरेक्टर
कालीगण्डकी फाउण्डेसन, कावासोती

सर्पदंश विश्वभरि सबैभन्दा वेवास्ता गरिएको एक जटिल स्वास्थ्य समस्या हो । नेपाल जस्तो अल्पविकसित वा अन्य विकासोन्मुख देशमा यस रोगलाई सम्बोधन गर्ने गरी प्रभावकारी कार्यक्रम सञ्चालन भएको पाइँदैन ।

सर्पदंश विशेष गरी नेपालको तराईदेखि उच्च पहाडी क्षेत्रमा बसोबास गर्ने करिब ७०% ग्रामिण जनताका लागि एक अति नै संवेदनशील, आकस्मिक एवं जटिल स्वास्थ्य समस्या हो । सर्पदंशमा अतिशिघ्र प्रतिविष प्रयोग गरी उपचार हुन सके मात्र धेरै जसो बिरामी बाँच्न सक्ने सम्भावना रहन्छ । घटना भएको स्थानबाट उपचार केन्द्र टाढा भएको अवस्थामा उचित प्राथमिक उपचार विधि अपनाउन सके मात्र शरीरमा विष फैलिने गति ढिला हुन्छ र शारीरिक अवस्था बिग्रन नपाउँदै प्रतिविषबाट उपचार गर्न सकिन्छ ।

सर्पको विष विभिन्न प्रोटिनको मिश्रण भएको रस हो । यसलाई विषालु सर्पको टाउकोमा रहेका विषग्रन्थीहरुले उत्पादन गर्दछन् । सर्पदंश भएको बेला वा सर्पले शिकार गरेको बेला, सर्पको विषदन्तको बाटो हुँदै विषरसलाई मानिस वा शिकारको शरीरमा प्रवेश गराउँछ र आहारलाई मार्दछ वा असक्त बनाउँछ । प्रतिविष बनाउनको लागि घोडा वा अन्य जनावरको शरीरमा करिब एक वर्षसम्म एउटा वा धेरै सर्पको विष उक्त जनावरलाई प्रतिकूल असर नपर्ने गरी पठाइन्छ । उक्त जनावरले विष विरुद्ध प्रतिरोधात्मक क्षमता वृद्धि गर्दै जान्छ । त्यसपछि उक्त जनावरको रगतमा बनेको विशेष प्रोटिनलाई प्रशोधन गरी तयार पारिएको औषधीलाई नै प्रतिविष भनिन्छ । उक्त प्रशोधित प्रतिविषलाई प्रयोग गरी विभिन्न सर्पदंशको उपचार गर्ने गरिन्छ । यसरी सर्पदंशको उपचार गर्ने औषधी सर्पको विष नै प्रयोग गरी बनाइन्छ । यस प्रकारको प्रतिविषको विकास सन् १८९५ मा फ्रान्सका वैज्ञानिक अलवर्ट क्यालमेटले गरेका थिए ।

आफ्नो परिस्थिति अनुसार विभिन्न प्रजातिका सर्पहरु विभिन्न ठाउँमा रहेका हुन्छन् । सबै प्रकारका विषालु सर्पहरु सबै ठाउँमा पाइँदैनन् । फरकफरक ठाउँ विशेषमा खासखास सर्पहरु रहने हुँदा विषका विरुद्ध तयार पारिएको प्रतिविष पनि सिमित क्षेत्रमा सर्पको टोकाईको उपचारका लागि मात्रै प्रभावकारी हुन्छ । यसरी बनाइएको प्रतिविषको वितरण सिमित ठाउँका लागि मात्रै उपयोगी हुने हुँदा प्रतिविष उत्पादन लागत धेरै हुन सक्छ । तसर्थ प्रतिविषको व्यापार प्रशस्त फाइदाजन्य व्यापार नहुने सम्भावना धेरै रहन्छ । प्रतिविष किन्नको लागि जनताको 'गरीबी' पर्खाल बन्नु नपरोस् भन्ने तर्फ ध्यान दिनु आवश्यक छ ।

जलवायु परिवर्तनकै कारणले विषालु सर्पदंश नेपालका पहाडी इलाकामा समेत फेला पर्न थालेका छन् । यस प्रकारका स्वास्थ्य समस्यालाई अहिले नै सम्बोधन गर्नुपर्ने देखिन्छ । नेपालकै साधन र स्रोत प्रयोग गरी नेपालभित्रै उक्त प्रतिविष उत्पादन गर्न सके सबैभन्दा उत्तम र दीर्घकालीन समस्या समाधानको उपाय हुन सक्दछ । विश्व स्वास्थ्य सङ्गठन र अन्य विश्वव्यापी सर्पदंशको विज्ञहरुको बुझाई र सुझाव के पनि छ भने प्रत्येक देशका सर्पदंशका बिरामीको उपचार उक्त ठाउँकै रैथाने सर्पहरुको विरुद्ध बनेको प्रतिविषद्वारा हुनु पर्दछ । यसको उत्पादन महङ्गो र गाह्रो हुने, यसको उपयोग गर्ने अधिकांश बिरामी पनि विपन्न हुने भएकाले औषधीलाई मनग्गे फाइदा लिने गरी व्यापार गर्न कठिन हुन्छ । यसका लागि सरकारले विश्व स्वास्थ्य सङ्गठन जस्ता मानवीय सेवामा लागेका संस्थाहरुसँग विशेष सहयोग माग्नुपर्छ र स्वदेशमै प्रतिविषको नियमित उत्पादन तथा वितरणको वातावरण बनाइदिनु पर्दछ ।

केही आधारभूत अध्ययनका लागि मैले देव पाण्डे क्षेत्रीय प्रतिविषको आवश्यकता २००६ मा बेलायतको गल्याक्सोमा भएको विष शास्त्र सम्बन्धी अन्तर्राष्ट्रिय समाज (International Society of Toxicology) को सम्मेलन र श्रीलंकामा भएको त्यस्तै अर्को सम्मेलनबाट बुझेपछि सोको लागि आधारभूत अनुसन्धान तथा सर्पपालन सम्बन्धी परियोजना गरेको र साथै यसको सामुहिक पहल गरेको छु । नेपाल सरकारका तर्फबाट त्यस सम्बन्धी समस्यालाई अति जरुरी र संवेदनशील रोगका रुपमा लिने हो भने गुणस्तरयुक्त प्रतिविष नेपालमा नै बनाउन सकिन्छ । सरकारी र गैर सरकारी संस्थाको सहयोग आजैबाट जुटेर काम सुरु गरेको स्थितिमा पनि प्रतिविष उत्पादन भई यस सङ्कटबाट मुक्ति पाउन कम्तिमा पनि दुई देखि पाँच वर्ष लाग्ने देखिन्छ । हाम्रो देश आफै सक्षम नभइन्जेलका लागि सर्प पालनबाट नियमित विष उत्पादन गरी नेपाली सर्पको विषलाई गुणस्तर युक्त औषधी कम्पनीमा पठाई नेपालका लागि प्रतिविष बनाउन अनुरोध गर्न सकिन्छ ।

अष्ट्रेलियाको प्रतिविष उत्पादन गर्ने कम्पनी कमनवेल्थ सेरम ल्याबोरेटरीले टेइपन (Taipan) नामक सर्पको सर्पदशंका लागि बनाएको प्रतिविषको प्रति भाइलको करिब अमेरिकी डलर १४३० पर्दछ । त्यसैले प्रतिविष उपचार विकसित देशहरुका लागि पनि महङ्गो र चुनौतिको विषय बनेको छ । नेपाल सरकारका एक अधिकृतले अल नेपाल न्यूज डटकम (२०१३ अगष्ट २६) लाई जानकारी गराए अनुसार, नेपाललाई वर्षेनी ४०,००० भाइल्स प्रतिविष आवश्यक पर्दछ । प्रति भाइलले १०५१ रुपैयाँको दरले नेपाल सरकारले करिब चार करोड दुई लाख रुपैयाँ भारतीय प्रतिविष उत्पादन गर्ने कम्पनीलाई बुझाउनुपर्ने हुन्छ । नेपाल सरकारले आफू अल्पविकसित राष्ट्र भएर पनि नेपाली जनतालाई निःशुल्क प्रतिविष उपलब्ध गराएर विश्वमा नै एक नमूना राष्ट्रको रुपमा प्रतिष्ठा प्राप्त गरेको छ । नेपालमा नै उक्त औषधी उत्पादन गर्न सके यस खाले औषधी सङ्कटबाट मुक्त हुन सकिन्थियो साथै विदेशीएको करौडौं रुपैयाँ स्वदेशमा नै सञ्चित भई नेपालको आर्थिक मेरुदण्ड समेत बलियो हुने थियो । तर नेपाल भित्र नै यो औषधी उत्पादन गर्नका लागि पहिले केही आधारभूत अनुसन्धानहरु गर्नुपर्ने हुन्छ । भारत र अन्य देशमा औषधिको प्रभावकारिताका बारेमा प्रश्न चिन्ह राखेकाले नेपालका लागि उक्त औषधि कति प्रभावकारी छ भन्ने खालका गहिरो अनुसन्धान हुन बाँकी नै छ । नेपालका प्रोफेसर डा. सञ्जिव शर्माको नेतृत्वमा हालसालै सम्पन्न एक अध्ययनले तत् सम्बन्धी केही तथ्य छिट्टै प्रकाश गर्नेछ ।

Pica: Causes, Common Cravings and Risks during Pregnancy

Sweta Rauniyar Shah
Product Development Officer
Market Planning Department

The word pica is Latin for magpie, which is a bird notorious for eating almost anything. Pica is the practice of craving and eating substances with little or no nutritional value. Some pregnancy and pica related cravings involve non-food substances such as dirt or chalk; however, most of these cravings are for things like pickles and ice cream.

Majority of women experience cravings during pregnancy. Pica cravings are most commonly seen in children and occur in approximately 25-30% of all children.

Most young infants put non-food items into their mouth. This is a developmentally normal approach for babies to explore and understand the world around them. Additionally, it is not uncommon for toddlers and some young children to ingest things like dirt or sand. It is when the behavior becomes repetitive, despite attempts to redirect or restrict it, a Pica diagnosis may be considered.

What causes pica in pregnancy?

Pica cravings are developed during pregnancy but the exact reason is not known. There is currently no identified cause; however, according to the Journal of American Dietetic Association there may be a connection to an iron deficiency. Some speculate that pica cravings are the body's attempt to obtain that are missing through normal food consumption. Pica cravings may also be related to an underlying physical or mental illness.

Common Pregnancy and Pica Cravings:

The most common substances craved during pregnancy are dirt, clay and laundry starch.

Other pica cravings include:

- burnt matches
- charcoal
- ice
- toothpaste
- sand
- coffee grounds
- baking soda
- cigarette ashes
- stones
- mothballs
- cornstarch
- soap
- plaster

Are There Risks to the Baby?

Pica cravings are a concern because non-food items may contain toxic or parasitic ingredients. Eating non-food substances is potentially harmful to both mother and the baby. These substances may interfere with the nutrient absorption of healthy food substances and actually cause a deficiency.

Managing Pica

Don't panic; it happens and is not abnormal. The most important thing is to inform your health care provider to make sure you have a complete understanding of the specific risks associated with your cravings.

How to deal with pica cravings:

- Inform your health care provider and review your prenatal health records
- Monitor your iron status along with other vitamin and mineral intake
- Consider potential substitutes for the cravings such as chewing sugarless gum
- Inform a friend of your craving who can help you avoid non-food items.

Pica Treatment:

- A behavioral approach is generally the most effective intervention for treating Pica, typically involving the use of Cognitive Behavioral Therapy (CBT) to help build skills around distinguishing edible foods from non-edible ones. Family therapy is also utilized in the treatment and management of Pica, and applied behavior therapy is commonly used for those with intellectual disabilities.

- Pica often goes unreported, and the prevalence of this disorder is unknown. However, due to the risks to both the physical and mental well-being of the individuals who engage in this behavior, the consumption of non-food items should be taken very seriously when reported or observed.

Reference: Mayoclinic

Orodispersible Tablets

Market Planning Department
TIME Pharmaceuticals

Oral route is the most common and preferred route of drug administration. Tablets and capsules are the most popular solid dosage forms. However many people face difficulty in swallowing tablets and hard gelatin capsules. Such difficulty in swallowing, known as dysphagia is observed in about 35% of the general population; up to 60% of the elderly population and 18-22% in all patients in long-term care facilities. Orodispersible tablets (ODT), also called as orally disintegrating tablets, mouth-dissolving tablets, rapid-dissolving tablets, fast-disintegrating tablets, fast dissolving tablets serve as the alternative dosage form in such cases.

In European Pharmacopoeia, orodispersible tablets are defined as uncoated tablets intended to be placed in the mouth where they disperse readily within 3 minutes before swallowing. United States Pharmacopoeia defines ODT as solid dosage form containing a medicinal substance or active ingredient which disintegrates rapidly usually within a matter of seconds when placed upon the tongue. Thus, orodispersible tablets are solid unit dosage forms which are composed of super disintegrants, which help them to dissolve the tablets in the mouth in the presence of saliva without any difficulty of swallowing.

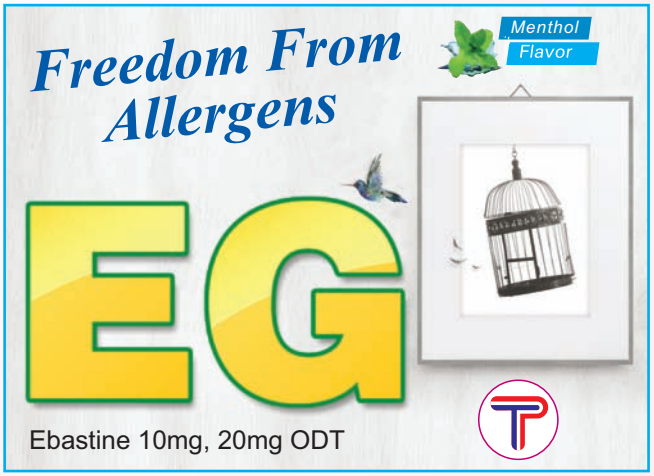
Orodispersible tablets have potential advantages over conventional solid dosage forms:

- No requirement of water or other liquid to swallow
- Easily dissolution or disintegration in saliva within a few seconds
- Pleasing taste
- Leave in trace amount or no residue in the mouth when administered
- Being portable and easy to transport
- Can be easily administered to children, old and mentally disabled patients.
- Accurate dosing as compared to liquids
- Dissolution and absorption of drug is fast, offering rapid onset of action
- Bioavailability of drugs is increased as some drugs are absorbed from mouth, pharynx and esophagus through saliva transferring down into the stomach
- First pass metabolism is reduced, thus offering improved bioavailability and thus reduced dose and side effects
- Free from risk of suffocation due to physical obstruction when swallowed, thus offering improved safety.

Several factors must be considered when selecting drug candidates for delivery as ODT dosage forms:

- The drugs which have significantly different pharmacokinetic profiles compared with the same dose administered in a conventional dosage form
- The drugs that produce a significant amount of toxic metabolites mediated by first pass liver metabolism and gastric metabolism and for drugs that have a substantial fraction of absorption in the oral cavity and segments of the pre-gastric GIT
- Drugs are having the ability to diffuse and partition into the epithelium of the upper GIT and those able to permeate oral mucosal tissue are considered ideal for ODT formulations
- Patients with sjogren's syndrome or dryness of the mouth due to decreased saliva production may not be good candidates for ODT formulations
- Drugs which are having a short half life and needs frequent dosing, which are bitter or either having unacceptable taste whose taste masking cannot be achieved or which require controlled or sustained release are inappropriate for ODT formulation.

As a conclusion orally disintegrating tablets have many advantages compared with the other oral dosage forms, such as being better bioavailability, better patient compliance and improved efficacy. **Drugs which are designed in Orodispersible tablet form (ODT) should be counseled that they should dissolve in mouth with saliva rather than swallowing by water to take advantages as mentioned above like rapid onset and better bioavailability.**



A guy in a mental hospital placed two stones in his ears..

The doctor asked him, "What are you doing?"

he replied, "I'm listening to ROCK music!"

Scrotal Swellings in Children

Dr. Purushottam Adhikari
Medical Officer
Department of Pediatric Surgery
Kanti Children's Hospital

A newborn child in around a month of age develops the inguinoscrotal swelling and the parents are much anxious about the condition of child. Another child develops a swelling on the scrotum that disappears during sleep and reappears during standing.

Inguinoscrotal swellings are one of the commonest clinical presentations we encounter in the pediatric surgery outpatient department. Hernia and hydrocele accounts for majority of them. Hernia is the protrusion of abdominal contents through the patent processus vaginalis. Hydrocele is simply the collection of fluid in the scrotum and surrounding testicals.

Classic feature of the inguinal hernia is bulge in the groin that is aggravated while crying, coughing or straining. Hydrocele in majority of the case is transilluminant swelling on the scrotum and remain as it is during straining too. Physical examination is the definitive method of diagnosis but can be confirmed by use of ultrasound. Associated undescended testis, anomaly of the cord should be ruled out during the examination.

Repair of the inguinal hernia is the definitive treatment. It can be done by herniotomy, which is ligation of the sac. However, size of defects, amount of herniating content and ease of reduction are the aspects to consider for the timing of repair. As hernia is prone to land up in complication of being obstructed and incarcerated, the timing of surgery should be as soon as it is diagnosed. On the other hand hydrocele can be observed for first two years of life and later on if not subsided needs to be operated. Due to the lack of pediatric surgeons in other cities besides Kathmandu, most of these cases are referred to capital for the treatment in our country. Kanti Children's Hospital being the tertiary children hospital of Nepal, most of the cases referred here.

WORD PUZZLE GAME

Lucky Winner will Get Surprise Gift From

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Find out 5 brand Names of TIME Pharmaceuticals.

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N	I	R	A	B	E	P	R	A	B	R	P
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Y	X	I	P	R	S	D	J	I	U	T	Z
A	T	S	X	O	T	I	Y	N	B	I	Q
O	J	L	Y	C	F	V	C	O	J	M	D
M	A	G	U	I	E	M	W	B	L	E	E
R	Z	R	X	N	G	F	K	Z	I	S	O
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Winner Pictures

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Dr. Mukesh Sah
Medical Superintendent, Damak

Dr. Bikram Basnet
MBBS, Tamgas

Dr. A.D Bhatta
Con. Urologist, KTM

Dr. Ashokananda Mishra
MDGP, Rajbiraj

Dr. Chirayou N. Bhari
Peadiatrician, Pokhara

Dr. Navin Kumar Karn,
MS Ortho, Biratnagar

Dr. Rakesh Mandal
Orthopedic, Gaighat

Dr. Rakhi Shah
Gyneacologist, Janakpur

Dr. Reeju Manandhar
Cardiologist, Kathmandu

Dr. Rukshana Haque
Gyneacologist, Butwal

TIME Pharmaceuticals (P.) Ltd. welcomes your comments/suggestions/inputs for coming issue of this bulletin.

Last date of "Word Puzzle Game" answers Submission : *15th Ashwin 2075 (1st Oct. 2018)*

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