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PHARMACY BULLETIN

HOSPITAL LABUAN

The Use of Sodium Valproate in Child Bearing Age Female Patients

By: Ung Yew Jye

Sodium Valproate is indicated for the treatment of generalized and partial epilepsy, also as treatment and prevention of mania associated with bipolar disorders. Sodium Valproate contains valproic acid, an active ingredient which is tetratogenic. Available data showed that in utero exposure to valproate may result in congenital malfunctions and also associated with an increased risk of developmental disorders.

Data from meta-analysis showed that 10.73% of children of epileptic women exposed to valproate monotherapy during pregnancy suffered from congenital malformations. The risk is dose dependent. The risk is greatest at higher doses above 1g daily. Types of malformations include neural tube defects, cleft lip and palate, facial dysmorphism, craniostenosis, cardiac, renal and urogenital defects, limb defects and multiple anomalies.

Exposure to valproate in utero can have adverse effects on mental and physical development of the expose children. Studies in preschool children that exposed in utero to valproate showed up to 30-40% experience delays in their early development such as talking and walking, lower intellectual abilities, memory problems and poor language skills. Available data also showed that there is increased risk of autism in children that exposed to valproate in utero compared with general study population.

Therefore, reassess the benefit/risk of valproate therapy regardless of indication. Consider stop the treatment or switch to alternative if possible. If the valproate treatment is to be continued, it is recommended to divide the daily dose into several small doses to be taken throughout the day at the lowest effective dosage possible. Using a prolonged release formulation may be preferable to other treatment forms. Valproate monotherapy and polytherapy are associated with congenital malfunctions, studies suggest that polytherapy is associated with greater risk of abnormal pregnancy compared to monotherapy. Folic acid can be given as supplement to decrease the general risk of neural tube defects however the evidence does not suggest it reduces the risk of birth defects if in utero expose to valproate. Prenatal monitoring should be done more often in order to detect possible occurrence of neural tube defects or malfunctions.

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INSIDE THIS ISSUE:

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Phosphate binders and chronic kidney disease

By: Siu Loe Ching

Hyperphosphataemia is an independent predictor of cardiovascular disease and mortality in patients with advanced (stage 4 and 5) chronic kidney disease (CKD) and is due to impaired phosphate excretion by the kidney. It is typically managed with oral phosphate binders in conjunction with dietary phosphate restriction. These drugs aim to lower serum phosphate by reducing intestinal absorption of dietary phosphate.

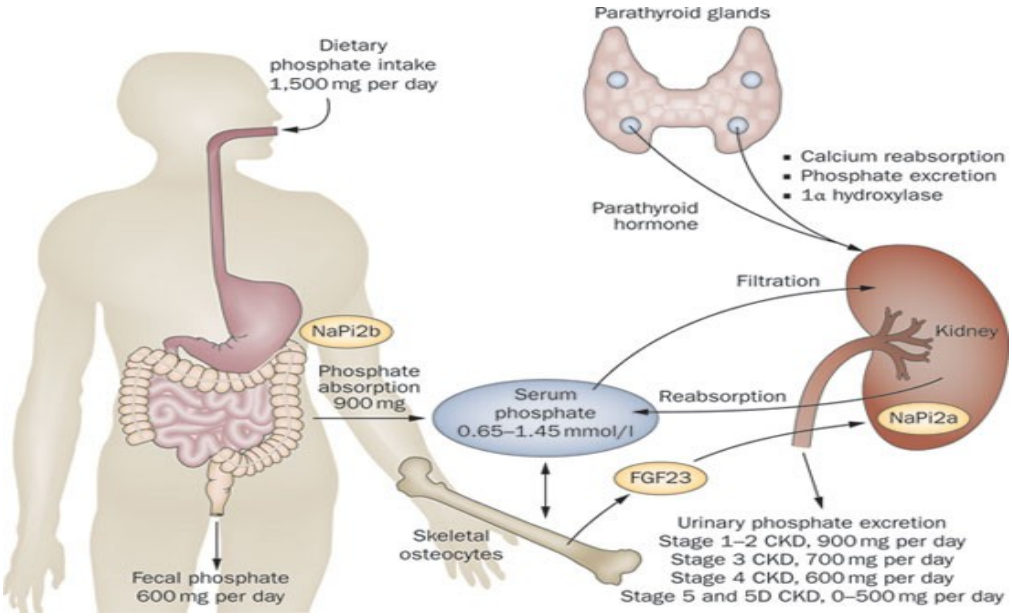
Phosphate binders are a commonly prescribed class of drug for patients on dialysis. There are three main types of phosphate binders available – calcium-containing binders (calcium carbonate) and aluminium‑containing binders (aluminium hydroxide), which have been around for many years and are cheap, and the new non-calcium-based binders (sevelamer, lanthanum and sucroferric oxyhydroxide) which are considerably more expensive.

Calcium carbonate is the most common form of phosphate binder prescribed, in both non-dialysis and dialysis CKD patients. As with all phosphate binders, calcium-based binders are most effective when taken with meals (which also limits calcium absorption). They should be prescribed in conjunction with moderate dietary phosphate restriction, ideally supervised by an accredited practising dietitian. Phosphate-rich foods with a high phosphate to protein ratio (processed foods, fast foods and cola drinks) are best avoided, while foods with a high biologic value (e.g. meats and eggs) should be retained to maintain nutritional status.

Common adverse effect of calcium carbonate is gastrointestinal upset, particularly constipation and its use has been associated with an increased risk of hypercalcemia and accelerated vascular calcifications. Aluminium hydroxide has an excellent phosphatebinding capacity and has been used for over three decades.

However it has significant adverse effects profile (e.g. potential central nervous system toxicity, microcytic anaemia, osteomalacia, gastrointestinal upset) and requires regular monitoring of serum aluminium. Non-calcium-based binders are equally or slightly less effective than calcium -containing compounds. They would not induce an increase in calcium levels but may have relevant side effects, including gastrointestinal symptoms for all and risk of tissue accumulation for lanthanum.

Phosphate binders and chronic kidney disease-continues



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Leukonychia

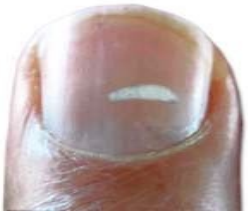
By: Sanggeri M.Veloo

Leukonychia commonly called white nails or milk spots on nails and more frequently located on fingernails compared to toenails but can occur with both. This White spots on nails can reveal anything from an injury to a deficiency to even some diseases.

Leukonychia can be classified into true leukonychia and pseudoleukonychia. True eukonychia tends to be the white discoloration of the nail attributable to matrix dysfunction occurs in various patterns. True leukonychia can further be divided into total leukonychia and partial leukonychia. Total leukonychia usually an autosomal dominantly inherited condition which occurs due to delay in keratin maturation where all nails are normally milky porcelain white in color. Partial Leukonychia are normally caused by trauma secondary to manicure or another manipulation. Pseudoleukonychia are white discoloration caused by the changes of nail bed.

Home remedies for white spots on nails

- Allow the spot to grow out
- Moisturize your nails
- Eat a healthy diet with zinc, protein, calcium, vitamin C, and iron
- Keep your nails clean and properly cut to reduce the risk of infection
- Protect your nails from injury



If the white spots are spreading, you should see a doctor

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FDA NEWLY EXPANDED INDICATIONS

By: Ivy Lau Chu Chung

Sofosubuvir (Sovaldi) and Ledipasvir & Sofosbuvir (Harvoni), FDA approved supplemental applications of Sofosubuvir (Sovaldi) and Ledipasvir & Sofosbuvir (Harvoni) to treat Hepatitic C virus(HCV) in pediatric patients. Both drugs were previously approved to treat HCV in adults, but the latest approval expands use to include children aged 12-17 years old.

Topiramate(Qudexy XR) FDA approved the expanded indication of extended-release capsules in the prophylaxis of migraine headaches in adults and adolescents aged 12 years and older. Qudexy XR is also approved for use as initial monotherapy and adjunctive therapy in patients 2 years of age and older with partial-onset or primary generalized tonic-clonic seizures.

Safinamide (Xadago) FDA has approved as an add-on treatment for patients with Parkinson's disease. The drug is indicated as an additional treatment for individuals who are already taking levodopa/carbidopa and who are experiencing "off" episodes and better scores on a measure of motor function assessed during "on" time than before treatment.

Tiotropium Bromide inhalation spray (Spiriva Respimat) FDA expanded the indication of it on 16 February 2017, allowing the drug to be used as a long-term, once daily asthma treatment in patients aged 6 years and older. Spiriva Respimat was initially approval in 2014 for the treatment of chronic obstructive pulmonary disease (COPD) in patients 12 years and older.

Budesonide& Formoterol Fumarate inhalation aerosol (Symbicort) 80/4.5mcg FDA expanded the indication of AstraZeneca's Budesonide& Formoterol Fumarate inhalation aerosol (Symbicort) 80/4.5mcg on January 30, 2017. Previously approved for the treatment of asthma in patients aged 12 and older, Symbicort 80/4.5mcg can now be used for this purpose in patients as young as 6 years old. A 160/4.5mcg version of the inhaler, indicated for the treatment of asthma in patients aged 12 years and older and for the treatment of COPD in adults, is also available.

Valbenazine (Ingrezza) First drug for Tardive Dyskinesia- capsule. The approval is based on a clinical trial of 234 participants that demonstrated Ingrezza's efficacy compared to a placebo. Patients who received Ingrezza experienced an improvement in the severity of abnormal involuntary movements after 6 weeks compared to those who received a placebo.

Desmopressin acetate nasal spray (Noctiva) FDA approved the nasal spray for the adults awake at least twice at night for urination.

INTERESTING UPDATES

FDA approved Odactra, the first allergen extract to be administered sublingually to treat house dust mite-induced nasal inflammation (allergic rhinitis), with or without eye inflammation, in adults aged 18 through 65. Odactra is a once-daily tablets that exposes patients to house dust mite allergens.

NEWLY ADDED DRUGS

VALBENAZINE (INGREZZA)
CAPSULE- Parkinson's Disease.

AVELUMAB (BAVENCIO)
Injection– Merkel cell carcinoma, skin cancer

DUPILUMAB (DUPIXENT)
Injection – inadequately controlled moderate-to-severe atopic dermatitis

PEMBROLIZUMAB(KEYTRUDA) – advanced non small cell lung cancer

DEFLAZACORT (EMFLAZA)
tablet- treatment of Duchenne muscular dystrophy

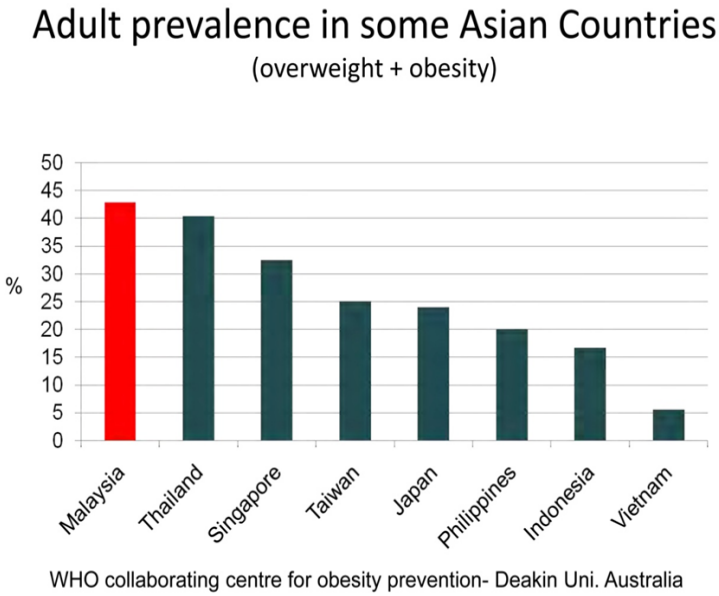
ETELCALCETIDE (PARSABIV)- treatment of secondary hyperparathyroidism in adults patients with CKD.

DAPAGLIFLOZIN & SAXAGLIPTIN (QTERN) TABLET- TYPE 2 DIABETES

BRODALUMAB (SILIQ)- MODERAT-TO-SEVERE PLAQUE PSORIASIS.

The Truth about Obesity

By: Michelle L.Tan



WHO collaborating centre for obesity prevention- Deakin Uni. Australia

Malaysia was rated as the highest among Asian countries for obesity. According to a study in 2014, 45.3% of Malaysian was rated overweight (BMI ≥25) compared to other Asian countries. On top of that, a recent survey from National Health and Morbidity Survey of 2015, showed that obese (BMI ≥30) Malaysians make up of 17.7% of the population compared to 15.1% in 2011. These figures may increase drastically over the years.

As we know, obesity may run in genetics, age and medical problems, but the main contributing factors are inactivity and unhealthy diet. With a sedentary lifestyle in modern world, people tend to take in more calories everyday which contributes to weight gain. Furthermore, diet that is high in calories, especially cities booming with numerous fast food joints, may further worsening the condition.

The goal of obesity treatment is to stay at a healthy weight. A team of health professionals, such as dietitian, behavior counselor and obesity specialist, will help a patient to understand and make changes in eating styles and activity habits. This is important because as obesity is being ignored, more complications may occur such as diabetes, heart problem and other major problems.

Losing weight may require diet and regular exercise, but sometimes in certain situation, weight loss medication is added to aid the process. Doctor may recommend medication if other methods are not working properly.

Anti-obesity medications can be classified into two groups:

Central nervous system to suppress appetite

Medications (such as Lorcaserin) acting on central nervous system works by suppressing and decreasing appetite. These systemically acting medication present certain health risks (due to side effects e.g. insomnia, palpitation, etc.) and do little to bring about behavioral changes that are necessary for long term weight management.

Gastrointestinal system to reduce fat absorption

This medication (such as Orlistat) works by blocking our lipase enzyme from breaking the fats, preventing fat intake (certain percentage) from being absorbed into our body. By blocking the fat from digestion, the undigested fat needs to be excreted from the intestinal tract. The common treatment effects are:

- Gas with oily discharge
- Increase in bowel movements and increased urgency
- Fatty or oily stools

In some cases, bariatric surgery is an option. This surgery limits the amount of food you're able to comfortably eat or decreases the absorption of food and calories or both. While weight-loss surgery offers the best chance of losing the most weight, it can pose serious risks. This method may be considered if you have tried other methods to lose weight that haven't worked and:

- extreme obesity (BMI of 40 or higher)
- have a serious weight-related health problem, such as diabetes or high blood pressure
- patient is committed to making the lifestyle changes that are necessary for surgery to work

As a conclusion, although healthcare is readily available for the treatment of obesity, the awareness on this worldwide epidemic in our community is still naïve. To combat obesity, innovative strategies such as campaigns and education on health awareness must be promoted among our community.

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PHARMACY STAFF MOVEMENT

New Staff

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2) Farah Ayuni bt Ghazali (PF UF41)
3) Nur Izza Farhana Bt Kassim (PRP UF41)
4) Jason Lee Kung Yin (PRP UF41)

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1) Kuapih@ Florina Kimjun (PF UF41)
2) Carissa T'en Sing Ying (PF UF41)