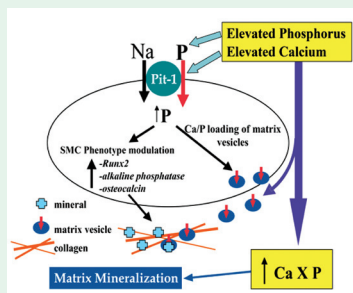


## REVIEW ARTICLE

### Hyperphosphatemia. *The hidden killer in chronic kidney disease*



Proposed model for the effects of elevated calcium (Ca) and phosphorus (P) on vascular smooth muscle cell (SMC) matrix mineralization. Republished with permission from the American Society of Nephrology. Giachelli CM. Vascular calcification mechanisms. *J Am Soc Nephrol* 2004; 15: 2959-2964. Na - sodium

This article by Askar explores the new aspects of pathogenesis of vascular calcification as demonstrated by recent advances showing a recognized regulating role of phosphorus in vascular smooth muscle cell (VSMC) calcification. Hyperphosphatemia stimulates VSMC to convert from contractile cell type to an osteogenic cell type, through an increased intracellular phosphorus uptake via sodium dependent phosphate co-transporter (Pit-1), thus leading to vascular calcification. This novel mechanism may help in finding a new pharmacological therapy to reduce, or prevent blood vessel calcification. Aggressive management of hyperphosphatemia through dietary phosphate restriction, effective dialysis, and different kinds of phosphate binders is needed for optimal control of serum phosphate, in order to avoid calcification of blood vessels, and so reducing mortality in chronic kidney disease.

see page 13

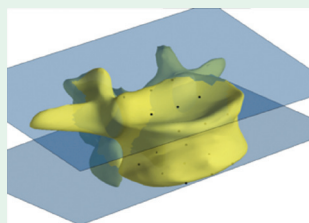
## ARTICLES

### Characteristics of pediatric diabetic ketoacidosis patients in Saudi Arabia

In this study, Naeem et al give a key message regarding diabetic ketoacidosis (DKA) in children in a large university hospital in Saudi Arabia. The major strength of the article relies on the wide spectral focus on presentation and management along with a novel aspect of reporting the spatial correction of bio-chemical profile over a 12-hour time frame. The researchers also compared DKA features in newly diagnosed versus existing diabetics. It is worth pointing out the differences from previous reports regarding the mean age of presentation, higher non-compliance rate, prevalence of abdominal pain, and others. These findings will have future implications on preventive and curative measures.

see page 20

### The efficacy of a percutaneous expandable titanium device in anatomical reduction of vertebral compression fractures of the thoracolumbar spine



A 3D computerized calculation of the kyphotic angle. The least-squares plane through these points is used to compute the angular orientation of the endplates. The angle measured is the difference between upper and lower vertebral endplates.

Vertebral compression fractures (VCF) represent a true concern in the aging population. A recent epidemiological study from Saudi Arabia revealed a prevalence of 34% among a Saudi population 50-79 years of age. Functional disabilities, chronic pain, and disturbance of the quality of life are symptoms experienced by patients suffering from VCF. In this prospective study of 27 patients, a percutaneous procedure using intravertebral cranio-caudal expandable titanium implants, SpineJack® was used to achieve reduction of fractures prior to their stabilization using acrylic cement. Good clinical results in pain control and the possibility to achieve anatomical restoration including reduction of the fractures endplates and the vertebral kyphosis angles were seen.

see page 52

## CASE REPORT

### Desmoid tumor (fibromatosis) of the head and neck



Clinical photo showing a mass in the left postero-lateral aspect of the neck (arrow)

Alherabi et al present a rather rare and interesting case of desmoid tumor (fibromatosis) of the upper neck region of a female patient from Saudi Arabia. The main aim of this report is to increase the awareness of the Otolaryngology-Head and Neck community, and report available treatment options of this condition. They concluded that desmoid tumors are rare benign tumors with a unique biologic behavior and high propensity for local recurrence. Due to the high recurrence rate, a multi-modality management strategy is usually employed to control the disease; surgery followed by radiation therapy for control of residual, or recurrent disease.

see page 101