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SYMPOSIUM PAPER

Introduction to second special issue on the Proceedings of the 3rd International Urolithiasis Research Symposium held in Indianapolis

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Introduction for part 2

The 3rd International Urolithiasis Research Symposium, organized by the International Kidney Stone Institute, was held in Indianapolis, IN, USA, on 3–4 December 2009. The Symposium included special sessions on Nephrocalcinosis, Pediatric Stone Disease, Hypercalciuria and Plaque, and Stone Analysis. There were additionally two sessions on Shock Wave Lithotripsy, looking at renal injury and the mechanisms underlying tissue damage by shock waves. The Symposium also included two live stone surgeries that allowed participants to see two distinctly different pathologies on live video, with added commentary by experts in the auditorium showing biopsy results from similar patients.

A main theme running throughout the Symposium was that we have much to learn about the pathologies underlying the different forms of stone disease. For too long these pathologies have been lumped together, but it is quite clear from recent studies in patients that trying to study 'stone disease' in a 'calcium stone' patient group that includes, for example, both idiopathic calcium oxalate stone formers and patients who form calcium oxalate stones as a consequence of bowel disease is very much a study of "apples and oranges." Such confusion has clouded work in the past. In contrast, new clarity in this field promises to allow an acceleration of study of the diseases that result in urinary calculi.

Included in this second installment of papers from the Symposium is a series comparing renal tissue calcifications between human disease and animal models. Miller et al. show how endoscopic viewing of the calyceal system can allow one to know with certainty which radiologic calcifications are nephrocalcinosis and which are urinary stones, while Khan reviews various animal models of renal calcification. Then Evan et al. relate the pathologic findings of two new mouse models to those found in humans with idiopathic calcium oxalate stone disease. Matlaga et al. give us a review of pediatric stone diseases, and Daudon et al. lead off a series of papers on stone analysis with a comprehensive review of phosphate stones and what is known of their etiology. We end with four papers on the general topic of lithotripsy, highlighted by the study of Shah et al. reporting a novel method to non-invasively displace small stones or stone fragments from the calyceal system to the ureteropelvic junction using pulsed ultrasound.

The next International Urolithiasis Research Symposium is scheduled for 16–17 June 2011, again in Indianapolis. We look forward to seeing you there.

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