

9-1-2012

Urinary stone disease: Great progress with promise for the future.

Demetrius H. Bagley
Thomas Jefferson University

Follow this and additional works at: <https://jdc.jefferson.edu/urologyfp>



Part of the [Urology Commons](#)

[Let us know how access to this document benefits you](#)

Recommended Citation

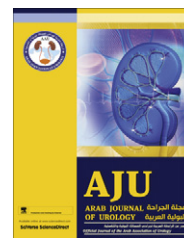
Bagley, Demetrius H., "Urinary stone disease: Great progress with promise for the future." (2012).
Department of Urology Faculty Papers. Paper 44.
<https://jdc.jefferson.edu/urologyfp/44>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Department of Urology Faculty Papers by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.



Arab Journal of Urology (Official Journal of the Arab Association of Urology)

www.sciencedirect.com



EDITORIAL

Urinary stone disease: Great progress with promise for the future

Urinary calculus disease has been a scourge on mankind since ancient times. Research in the field has been hampered by lack of funds and the lack of cachet with the public such as seen with cancer or heart disease. In recent years there have been marked changes led by urologists in the diagnosis, treatment and long-term management of calculi.

The vast majority of urinary stones pass spontaneously. Another option has been added with the development of medical expulsive therapy. Yet, further intervention is required in many patients with symptomatic, obstructive or enlarging stones which fail to pass.

Standard techniques and studies used in the diagnosis of calculi have included the abdominal radiograph and excretory urogram. Ultrasonography and computed tomography have been added as additional and now standard techniques. In each instance, it is essential to balance the diagnostic information needed and the risks from radiation exposure.

The most obvious changes in stone treatment have come with the interventional procedures. The endoscopic approaches have changed with the introduction of small, rigid and flexible ureteroscopes. Simultaneously, there has been development of endoscopic lithotripters which are small enough to fit through these endoscopes. Together these allow access even to intrarenal calculi to offer another alternative in treatment.

Percutaneous nephrostolithotomy has been the major technique for treating large renal calculi. Various smaller instruments have been used in a “mini-perc” pattern with variable results. The combination of fully flexible and functioning flexible ureteroscopes with the holmium laser or the electrohy-

draulic lithotripter offers a technique vying with percutaneous nephrostolithotomy for even large renal calculi.

The options for treatment of ureteric and renal calculi include shock wave lithotripsy, percutaneous nephrostolithotomy and ureteroscopy. The published guidelines have finally been updated and recommend the use of each of these techniques in certain situations. They should not be considered competing procedures but rather complementary for specific circumstances.

Stone disease in children has become more frequent and clinically more prominent. It is no longer dismissed as consisting only of infectious bladder stones in under-nourished individuals. It is known that there are renal and ureteric calculi, all of which may require treatment in this special group of patients.

Studies of the metabolic basis for stones and especially in recurrent stone-formers have begun to offer options for long-term preventive therapy. There is a known difference in the rates of stone disease in different parts of the world and the many options for evaluation and for treatment can also vary.

The training of the stone surgeon must include all aspects of stone management, from endoscopic and lithotripter techniques to long-term management and prevention. Open stone surgery has become rare but must be considered as an option in rare instances.

This issue also presents the relationship, both the parallels and the differences, between stone disease in human and veterinary medicine. There is an opportunity for profitable exchange between these disciplines. The findings may not be directly comparable and transferable, but both similarities and differences can present a recognition for the development of therapeutic options.

This special issue of the Arab Journal of Urology has taken a leading position in presenting information on the development, present status and future trends in the diagnosis, treatment and management of stone disease. It is a problem worldwide which is so common that it is seen by essentially all urologists, internists and even the patients’ neighbours. There has been tremendous progress and there is a vast opportunity for improvement in managing this disease.

Peer review under responsibility of Arab Association of Urology.





Demetrius H. Bagley
*Thomas Jefferson University, Department of Urology,
Philadelphia, PA, United States*
E-mail address: demetrius.bagley@jefferson.edu

Available online 14 August 2012