

## ◆ *Teknolojik İlerlemeler, Uygun Teknikler*

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Üroloji uygulamalarımızda önemli bir yeri olan üriner sistem taş hastalığı tedavisinde son yıllarda büyük teknolojik gelişmeler kaydedilmiştir. 1980'li yılların öncesinde açık taş cerrahileri önemli sayıda yapılmışken, seksenli yıllarda extracorporeal shock wave litotripsi (ESWL) cihazları ve takip eden yıllarda ise gelişen teknolojiye bağlı üretilen endoskopik aletler yardımıyla antegrad (perkutan nefrolitotripsi [PNL]) ve retrograd yöntemler (üreterorenoskopi [URS] ve retrograd intrarenal cerrahi [RIRC]) üriner sistem taş hastalığının tedavisinde uygulanmaya başlanmıştır. Özellikle URS' nin gelişimiyle üriner sistem taş hastalığının tedavisi dramatik bir şekilde değişmiştir. Açık taş cerrahisi günümüzde son derece nadir uygulanırken endoskopik cihazlardaki değişiklikler, flexibl yapıda URS'lerin geliştirilmesi, lazer teknolojisindeki ve kullanılan yardımcı malzemelerdeki hızlı gelişmeler nedeniyle açık taş cerrahisi böbrek taşı tedavisinde en invazif yöntem olarak kabul edilmeye başlanmıştır (Rosa ve ark. 2013).

Önceleri URS eşliğinde litotripsi, ureter taşları ve küçük böbrek taşlarının tedavisinde ESWL'ye alternatif olarak kabul edilmekteydi (Tiselius ve ark. 2001). Ancak endoskopik cihazlardaki gelişmelere bağlı olarak böbrek taşlarının tedavisinde antegrad girişimler (PNL) gelişmiş, daha sonraki yıllarda dayanıklı endoskopik cihazların tasarımı, ileri teknolojik gelişmeler ile kullanılan yardımcı malzemelerdeki yenilikler, URS konusunda devrim yaratmış ve flexibl URS (fURS)'nın geliştirilmesiyle böbrek taşlarının non invaziv tedavisi çok daha tercih edilir olmaya başlamıştır.

Tedavi yöntemlerinin farklılıkları ve yaygın olarak kullanılması ile beraber bu farklı ve etkili tedavi şekillerinin endikasyonları tartışılmaya başlanmıştır. Uygun

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