

**Read all about it...** It can be awkward when a patient asks you about a report in their favourite tabloid detailing an amazing research breakthrough or a 'cutting-edge' new treatment / test and you don't know what they are talking about! So this section fills you in on the facts.

## The common cold 'could cure bladder cancer'

The Mail Online – 5 July 2019

This report details the findings that a strain of coxsackie virus (CVA21) could have a beneficial effect in the treatment of bladder cancer. The press release (ahead of print in the journal *Clinical Cancer Research*) details the research that has been carried out by Dr Hardev Pandha at the University of Surrey and Royal Surrey County Hospital.

As you probably already know, coxsackie virus is a common RNA virus. Whilst infection certainly can cause rhinitis and sore throat symptoms, we probably know it best as the cause of hand, foot and mouth disease. In this phase 1 study, a preparation of coxsackie A21 known as 'CAVATAK' was instilled into bladders containing superficial tumour, around 8-11 days prior to transurethral resection of bladder tumour (TURBT) surgery. In the first nine patients, the instillation was CAVATAK alone, in the subsequent six, mitomycin C (MMC) was also used to investigate whether the increased cellular expression of the ICAM-1 adhesion molecule was due to MMC-enhanced oncolysis.

Whilst the primary endpoint was tolerability and safety, secondary endpoints were anti-tumour activity and effect on tumour in the resected tissue. The treatment was proved to be tolerable and safe, with the only

notable issue encountered being a urinary tract infection (UTI) (not uncommon in BCG immunotherapy either). Analysis of TURBT specimens showed that the vast majority of tumours were selectively infected by CVA21 (with surrounding tissues being spared). Analysed tissue also demonstrated marked upregulation of genes associated with cell death and apoptosis as well as multiple signs of 'immunological heat'; triggering a similar effect to what would be expected with BCG therapy. In total, the majority of tumours in this study demonstrated these effects and one patient had a 'complete response' with destruction of the tumour. CAVATAK appears to attack tumour cells through a variety of methods – contributing to apoptosis as well as triggering inflammation that leads to a BCG-like immune system attack.

Clearly, this is a small-scale, phase 1 result. However, these findings are clearly promising and give encouragement of future potential advances in a field that has seen few in recent years. It seems extremely unlikely that this will ever be a panacea for non-muscle invasive bladder cancer (NMIBC), but it could become a valuable adjunct to existing surgical and medical management.

## Blast of water could shrink an enlarged prostate as effectively as surgery – and with fewer side effects

The Daily Mail – 1 July 2019

The aquablation publications are coming thick and fast at the moment. The last year has seen publications from multiple groups as well as a review article of data from several different studies. This story concerns the publication of excellent two-year results from the WATER study, published in *Advances in Therapy*.

For those unfamiliar, aquablation is an alternative to transurethral resection of the prostate (TURP). It is performed under anaesthesia, in the operating theatre and utilises real-time transrectal ultrasound scanning of the prostate to map and guide an automated, robot controlled transurethral saline high-flow jet which dissects prostate tissue from within the urethra in a heat-free procedure.

The two-year data is hugely encouraging. The WATER study used men with sub-80cc prostates in a double-blinded trial, comparing to TURP. Results in terms of improvement in urinary

flowrates, reduction in International Prostate Symptom Scores (IPSS) and re-operation rate have all been shown to be near-identical to TURP. Furthermore, as one might hope for a heat-free procedure, there were no adverse effects on erectile function.

One challenge with this approach to prostate surgery remains the haemostasis. In the WATER II study (80-150cc prostates), 10% of patients required transfusion and 5% required a trip back to theatre for fulguration. Ideally, if one is to keep the procedure 'heat-free', then electrocautery should be avoided. Authors have described using good old-fashioned foley catheter traction to overcome this issue, but it is relatively minor challenge in an otherwise largely automated procedure. Time will tell whether aquablation will find a niche in a field that is becoming heavily populated with competing procedures.

## The hidden chemicals in cocaine that destroy users' bladders for life

The Sun – 5 July 2019

The Sun has been running a series of health stories to raise awareness of the dangers of cocaine use, in response to the alarming increase of cocaine abuse in the UK. Two separate stories were of particular interest. In both cases, it is not the cocaine itself that is the issue, rather it is the chemicals that the drug has been 'cut' with by the drug dealers.

In the article with the headline above, it was detailed that some cocaine is cut with phenacetin, which is a known risk factor for bladder cancer and a drug that has been banned from sale in the Western world since the early 1980's. Another story revealed that some is cut with levamisole, which was previously reported in the *BMJ* to cause a vasculitis which can lead to gangrene of various body parts, including the genitals.

These are key facts to be aware of; the grim reality of cocaine usage in the UK does not mean you are going to be seeing some interesting celebrity patients. The UK has some of the highest rates of cocaine usage across the world and whilst it is mainly a problem in young adults, it is not at all isolated to the rich or upper-class populations and usage appears to be highest in some of the most deprived parts of the country.

### SECTION EDITOR



Jordan Durrant,

Consultant Urological Surgeon, East Surrey Hospital.

E: [jordandurrant@gmail.com](mailto:jordandurrant@gmail.com)