In the Long Grass at the SIU

I remember a senior academic telling a story of how he was witness to the first airing of some seminal study; something of the order of importance of the first monoclonal antibody (it might even have been that)... at a late session on the last working day of a conference with only the speaker, the chairman, and a couple of others present.

Anyone who wants to know what The Great and Good had to say about trendy issues at the recent Société Internationale d’Urologie/SIU2009 and www.ttmed.com/ to visit who were unable to attend, especially those who

We invite everyone, especially those who were unable to attend, to visit www.fmed.com/urology/SIU2009 and watch the scientific sessions (19+ hours) that are posted online for review and reference.

A report (UP-2.144, pS277) from Tel Aviv gave details of 33 patients who had received salvage cryotherapy for radio recurrent prostate cancer. Biochemical recurrence-free survival at two years was 43% (14 patients). Complications were seen in 21 cases. Despite the high complication rate the authors feel the method has potential in selected cases, but larger studies and more follow-up are required. This type of conclusion is typical for a method that has its attractions but performs sub-optimally. It is good that these techniques are kept under review; advances in technology have been substantial but perhaps more is required if cryotherapy is to become more widely used. It is in general terms competing with other forms of ablative treatment, including radio-frequency ablation, which was the subject of two posters (UP-1063, pS189 & UP-1066, p190), both concerned with the treatment of small renal tumours. A total of only 64 patients were treated in both series combined. One claimed over 90% cancer control rate, complications ran at 10-15%. Inevitably the cases selected were those in older or less fit patients where more invasive methods were not possible. It is a common feature with new or developing strategies that they have to cut their teeth in the least promising scenarios. However another way of introducing new technology is to use it on benign conditions first where failure is a little more acceptable. Such seems to be the approach towards introducing vapourisation techniques with two descriptions of its use in treating benign prostatic hyperplasia (UP-1.044, pS184 & UP-3.085, pS320). Both reported endure excellent results in a patient with cutaneous bladder acellular matrix graft (BAMG) material in vitro. A further development of the BAMG concept described in UP-2.179, pS288 was to construct a tissue sandwich with mucosa cells on one side of the matrix and smooth muscle cells on the other, mimicking the native bladder structure and providing, the authors claim, a “good technology for further clinical bladder regeneration by the tissue engineering approach”. Among the posters relating to products adjunctive to surgery was a description of the successful experimental use of a new surgical glue (UP-1.051, pS186). The abstract concentrates on the properties of the glue; apart from being developed from food additives, nothing is said about its composition.

Moving from surgery to chemotherapy there were three kinase-related studies that caught my eye. One was to do with resistance, or perhaps more accurately, protection of a urothelial cancer cell line to mitomycin, mediated by fibronectin through the P13-k/Akt signaling pathway (UP-3.009, pS297). This is the subject of a full publication now in print [4]. The next-door poster (UP-3.010, pS297) concerned phosphoglycerate kinase as a potential therapeutic target affecting angiogenesis, but from immunohistochemical analysis of clinical bladder cancer material. The third study was on invasion in renal cancer cells promoted by gamma-aminobutyric acid through its receptor activation and a MAPKinase pathway. Attempts to individualise chemotherapy are always with us [5] but seem to await the breakthroughs that will see them widely adopted. Poster UP-3.001 offered an autologous cell culture with cyto-immunoassay protocol for tailoring drug...
combinations and doses in transitional cell carcinoma of the bladder. It fared well, albeit against a control group receiving BCG only. BK Polyomavirus can be horizontally as well as vertically transmitted within communities. BKV has a possible role in the initiation of prostate cancer by encoding oncoproteins interfering with tumour suppressor gene pathways. [8]

Mathematical modeling is a contentious issue [9] that will persist at the fringes of oncological research until computational power and logic progress sufficiently to make meaningful outcomes possible. A small step in this direction is suggested (UP-1.100, pS200) with a program that refines data from PSA measurements to give a “high diagnostic accuracy” (positive and negative predictive values ~85%). Less technically ambitious and with a result suggesting that progress is not always in a forward direction for every circumstance, the application of Partin tables to an Asian population revealed not just that they were a useful tool, but that the 1997 tables performed better than the more recent 2001 version [10,11].

Another example of beneficially retrograde progress is the description of a simplified TURP procedure “especially for the third world” (UP-3.074, pS317). The unrelenting march of technological sophistication (note the etymology of sophisticated is as a term of language). On the one hand there was a very practical study of prostate cancer awareness in male Chinese city-dwellers (UP-1.134) although the result that more education is desirable was somewhat predictable. Even more startling was a “Socio-Health Study” (poster number UP-2.137) on attitudes of prostate cancer patients towards their disease. The abstract starts “Considering the ever more prominent role of the patient within healthcare systems . . .” That is either a huge and hopefully unfair indictment of relatively recent medical practice or a statement of the extremely obvious. The observation that a vast majority of patients want to maintain their lifestyles and social or family contacts is unsurprising and it is to be hoped that it would have long been a factor in treatment scheduling.

There was also an interesting historical perspective on the origins of haematoxylin and its importance in the development of histopathology in general and Gleason scoring in particular (UP-3.094, pS323).

I have to finish as I started, with a personal note. I too was there in the deep rough at the SIU with a description of how my passion of recent years, cellular imaging of drug uptake using unlabelled agents visualised in live cells, finds its latest expression in the investigation of whether mid-range Fourier Transform Infrared (FT-IR) microspectroscopy offers any solutions (UP-1.119 pS207). In this poster I concentrated on the use of oil overlays to protect live cells during the imaging process. I’m not at all sure that FT-IR will ever rival fluorescence as an application in live-cell imaging, but in science as in romance, great fun can be had in the long grass - sometimes with unexpectedly creative results.

References

Figure 1: At many meetings (especially surgical ones) form seems to trumph substance. Not necessarily so in the SIU Long Grass!