Allan James – From Diagnosis to planning the treatment pathway

Aim

To clarify why for brain tumour patients and HCPs, the path is longer than we'd like. Priority is speed. Evidence shows that if a brain tumour is not treated quickly, outcome is not so good. It is important to get symptoms controlled and make sure side effects are not severe.

State of the art delivery of treatment.

There was a nihilistic attitude for many years. There wasn't much in the way of research then. In the early 1970s and 80s only a handful of people were interested in neuro oncology research. Now there is BNOS (British Neuro-Oncology Society), which has grown hugely. There is a massive increase in research – clinical trials and lab – all very important for improving management.

There's a drive to get on with management quickly, but clinicians can forget it takes a while for patients and carers to get their heads around things.

Brain tumours are not common.

150-250 brain tumours in West Scotland. The older you are, the bigger the risk. In the mid 50s age group it is an uncommon diagnosis. For 50s and 60s the incidence rises. Generally, the older the patient, the higher grade they will be diagnosed with.

We've no idea what causes them. There is fairly powerful evidence that mobile phones do not cause brain tumours. Exposure to radiation is a risk factor. Over the last 30 years there has been no increase in incidence of brain tumours for those aged 64 or less. For 65s plus, the incidence is rising. This could be because more people are getting investigated; there is more awareness; people are living longer and surviving other things that they may not have in the past, such as heart attacks and other cancers.

Older people with a brain tumour do less well. The biology and behaivour of tumour is different.

Management is not a straight road and not a meandering one.
Performance status and pathology of tumour is important. With surgery, the opinion now is that maximal resection gives a better outlook. Clinical information (i.e. age, extent of surgery, grade etc.) can begin to determine different prognostic groups. As can the biological make up of the tumour.

The pathway is: Symptoms –> scan –> diagnosis (and surgery) –> adjuvant therapy. How do clinicians prioritise which treatment/therapies are best? Clinicians need to remember, they are **"not treating the cancer, treating the patient"** i.e. being aware of side effects is very important in decision-making.

Presentation is not such a straight road either. Brain tumours present in many different ways. Patients often ask "why did diagnosis take so long"? There are extraordinarily unspecific symptoms. 100 brain tumours in 2.4million people in West Scotland. It would not strike a GP as 1st thing. Very few people present with a headache. Can present in different ways to different people, i.e. GP, stoke unit, neurology, general medicine, psychiatry.

It is hard to have a public health message on brain tumours, such as the Be Clear on Cancer campaign. We don't know how to do it. There is no high risk population either so can't target them and ask them to watch out for certain symptoms.

Scan After presentation, CT or MRI scan. The MDT is then presented with someone with a lump in the head. It has to decide if it's a tumour; it could be MS, for example.

MDT What and why? NICE guidelines. Can't expect 1 person to know all aspects of treatment. It is not fair on that person or the patient. Every patient in cancer has the right and need for MDT for optimal management (although there is no evidence to support the use of MDT but specialisation is better). Centres that do lots of operations have better outcomes – this is clearly demonstrated.

Neurosurgery, should it be more specialised? Yes – surgeons need to be up to date. Before a patient has surgery, there are many, many questions to consider.

Should tumour be debulked or biopsied? Survival advantage? Deterioration in survival or symptoms? Role for intraoperative chemo? Guidance surgery?

There are limitations to surgery. Take out as much as possible but don't damage the patient, as it's not curative.

Brain tumours are doing better.

Radiotherapy has improved - In the 1970s, a patient would be treated with whole brain radiotherapy, which is very toxic. In follow up, 90% of brain tumours come back in 2/3cm of where tumour starts, so radiotherapy can be kept focused. Now there is VMAT (velocity modulated arc therapy). Intersected beams means main brain sees less and the radiation can be shaped into any shape to spare healthy tissue or needed tissue (i.e. brain stem or optic chasm). There is a better dose distribution. It doesn't improve survival but lessens morbidity.

Clinical Trials – there are not enough. Patients have a right to clinical studies.

Key points

Symptoms – scan – diagnosis (and surgery) – adjuvant therapy
MDT is used for optimal management in a timely manner.

Questions

> **To what extent does that pathway apply if brain tumour is secondary?**
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> Special niche for secondary brain tumours. If cancer has spread everywhere, there's not much to offer. If just 1 or 2 brain tumours and cancer is well controlled elsewhere, would definitely try and treat with radiosurgery. Big part of MDT's work but doesn't translate into surgery or radiotherapy as much.

Megan Hill, BrainsTrust & ICPV, May 2013