In conversation with George Browning, author of *Browning's Audiology for Clinicians*

Prof George Browning,

Visiting Professor, Scottish Section Hearing Sciences, Glasgow Royal Infirmary; Emeritus Professor in Otorhinolaryngology, University of Glasgow; Honorary Consultant Otolaryngologist, Royal Infirmary, Glasgow, UK.

It is one of those superbly bright August mornings in London's West End. It gives Lamb's Conduit Street, where I'm meeting George Browning, an almost timeless feeling. The café we meet at is bustling and noisy, and I worry that I have failed my first brief (a spot that is quiet with not much background noise!), but we manage to find a cosy corner to settle into. Now in his 80s, there is a youthful, vibrant energy about George Browning, which I later reflect is perhaps the effect of boundless and contagious passion, curiosity and enthusiasm. Notably, the third edition of his much-loved book, *Browning's Audiology for Clinicians*, has been his latest endeavour and is now available to pre-order ahead of its publication, currently scheduled for later this year. Our interview is really a lovely conversation, full of anecdotes, pearls and reflections, which I shall do my best to capture and transcript.

> "In those days you did tuning fork tests and you operated on the ear with hammers and chisels"

Mr Browning, can we start by talking about your career highlights? What stands out for you looking back?

Well, you're really now broaching obituary territory (accompanied by a mischievous grin and much protesting from me).

Perhaps a brief timeline?

Well, my father was a doctor in the Western Infirmary, in the West End of Glasgow, and this is where I had my early training. Between them, my mother and father had four sons, three of whom did medicine, and I was the eldest. I was always much more of a practical chap and was impressed by surgery. I was particularly impressed by the then professor, Sir Andrew Watt Kay*, who was an academic surgeon, in that he did large control trials. He offered positions in his department where people could sidetrack and do an MD. This is where I did my MD and it was my first experience of an academic group. Drew Kay was an influential chap and he must've produced 15 knights of the realm, probably, in surgical posts!

**Sir Andrew Watt Kay was a Scottish academic surgeon. He was Regius Professor of Surgery at the University of Glasgow from 1964 to 1981. His research field included peptic ulcer disease and he developed the augmented histamine test, which bore his name. He was knighted for services to surgery.*

What was your MD on?

On people who had had vagotomy for duodenal ulcer and its effect on the bacteriology of their GI tract. The big mistake I made at that point was to not identify Helicobacter! It was not known about yet and was thought about as a contaminant. The whole thing in retrospect is fascinating, because you had a disease that was essentially an infection, and it was treated with vagotomies.

Remarkable! How did you come to ENT?

After my MD, I was wondering what specialty to do. At that time, one rotated between surgical specialties and I was impressed by neck surgery. Interestingly, back then, head and neck surgery was done by plastic surgeons. At the same time, Drew Kay was on the Medical Research Council (MRC) committee that decided 'hearing' is a topic of interest for the MRC. A national hearing test study was set up and a senior lecturer post created by Drew Kay, to lead the Scottish part of the study, which I took up. There was a team of us, and our aim was to study clinical practice. So, we did studies on the efficacy of tuning fork tests for example. It was at this point that I met Stuart Gatehouse*, an auditory scientist with whom I collaborated over the years. The Institute of Hearing Research (IHR) is still going at the Glasgow Royal Infirmary, though is now called Hearing Sciences.

** Stuart Gatehouse was an internationally renowned auditory scientist whose work included basic research, government policy and clinical practice in relation to hearing loss. He was based at Glasgow Royal Infirmary.*

What did otological practice look like in the early part of your career?

At that time, ENT around the country was not done in a general hospital, it was done in a separate hospital and it was mainly taking out tonsils. As for otology, well, you looked in the ear with an auroscope, you did tuning fork tests and you operated on the ear with hammers and chisels. They were beginning at that stage to use dental drills alongside hammers and chisels.

What about microscopes?

Oh no, we did use loupes. Microscopes were beginning to come in and what you had in clinic, of course, was a light and a head mirror to focus it with.

And after your senior lectureship?

I was eventually put in charge of the ENT department at the Royal Infirmary, along with three other consultants. It then became an academic ENT department and I was also in charge of undergraduate ENT teaching at Glasgow University. Medical books at this point were so old fashioned – you managed everybody with an antral washout to get rid of the dirt! I wrote a book at this time called *Updated ENT*. It ran to three editions and was greatly liked by the students. I also, at this stage, made video tapes on ENT examinations. I believe that it was the efficacy of clinical capability and assessment that influenced clinical outcomes, and that was my focus.

I then got a personal chair and appointed a senior registrar, Iain Swan, who was also an otologist. Essentially, we were two otologists and we did otology for central and east Glasgow, and therefore we were

able to prospectively audit our patients and undertake academic work.

Did your work on the Glasgow Benefit Inventory come about thus [1,2]?

Yes. Essentially, we developed the questionnaire to begin with. We decided that it should be tested on real patients and so we recruited all the patients that myself and Iain Swan operated on. It became clear there was a wide variation in reported benefit. We then plotted against symmetry and severity of hearing, which did bring the variation down. That was how it was developed. We then, because the Scottish office wanted us to do it, audited the discharge letters of everyone who had had ear surgery in Scotland, we took a random selection of patients based on where they fell on the plot and sent the questionnaire to them, and that's how the GBI was validated for its use in middle ear surgery.

Did anything impress or surprise you about the GBI?

I am surprised that its use became international. Many people wrote to us to translate it into Russian or Turkish etc. It would of course need to be validated in another country / culture / language, and that is not often done.

In my time at the Glasgow Royal Infirmary as chair, Ken McKenzie, Gerry McGarry and Janet Wilson, whose interests lay in ENT subspecialties other than otology, were appointed and we became, at Glasgow, a postgraduate continuing medical education centre for ENT, by having a core of academically trained consultants. We were running far more courses than any of the Royal Colleges.

It sounds like Glasgow Royal Infirmary became a real ENT powerhouse in that period. Would you say that time was perhaps a career highlight?

I would say so, yes. It was at that stage that we (myself, Iain Swan and Stuart Gatehouse) started running the Clinical Otology and Audiology Course, for which the first edition of the book was written. And we did that for 25 years!

What about international fellowships and travel?

As part of my training, I received a prestigious MRC fellowship which gave me a year in Boston. Have you heard of Schuknecht?

> "I believe that it was the efficacy of clinical capability and assessment that influenced clinical outcomes, and that was my focus"

Yes! Of the temporal bone library fame at the Mass Eye and Ear?

Yes, Schuknecht, who was an otologist, was there at the beginning of microsurgery of the ear. One of the interesting things he did was collect temporal bones and section them so that you could look at the histology of the ear.

The normal histology?

And the pathology. He wrote a book on pathology of the ear, but Schuknecht wasn't what would these days be considered an academic. Schuknecht himself had no interest in clinical trials, for example, but I did encourage a Dutch trainee, Koos Plantenga, to undertake a randomised control study of the endolymphatic sac of patients with Ménière's – truly blind as they weren't identified as having had Ménière's prior to studying the sections! There was a separate MIT Eatin-Peabody group under Nelson Kiang in the hospital that I joined where I did studies on chinchillas' hearing. Well, I gave them aminoglycoside antibiotics and I monitored their hearing: you had a cage with a fence in the middle and you trained the chinchilla to jump over the fence when they heard a noise [3]! I did get real academic training in the environment of the hospital, albeit not with Schuknecht.

What was that year like?

Fantastic. We had two young girls. My wife was a haematologist and had the year off. It was brilliant as we could do what we wanted. We hired a camper van and drove all around New England.

One of the things that Schuknecht had done in the past, and this really was novel at the time, was to run temporal bone courses. Inspired by this, I set up the Glasgow temporal bone course with Alastair Pettigrew.

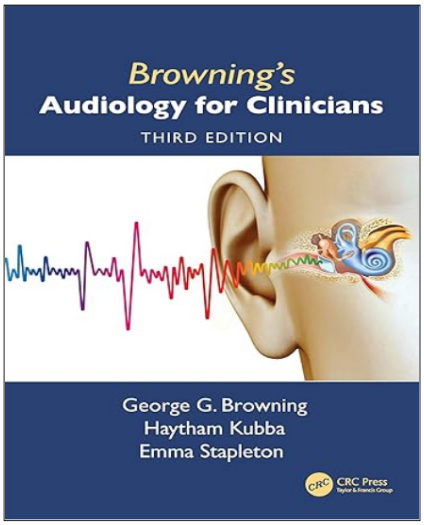
Was that the first of its kind in the UK?

Oh yes. We ran it over the weekend, and we went around the hospitals and borrowed their microscopes! Most otorhinolaryngology trainees in the United Kingdom came to it. I started being invited elsewhere to teach and so I've taught over 100 temporal bone courses throughout the world.

Is that how your connection with South Africa began?

Yes. There's a chap called James Luke based at Stellenbosch, who had been our fellow. In order to help him set up his department, we ran temporal bone courses to fundraise and I'm still involved in these courses.

What got you writing the new edition of *Browning's Audiology for Clinicians*?



The latest edition of Browning's Audiology for Clinicians is due to be published in April 2025 – look out for a review of the book in an upcoming issue of the magazine!

Well, when I travelled to temporal bone courses, people would mention 'I managed to get a copy of your book but it's hard to come by' and so I would take photocopies with me, particularly to the South Africa temporal bone course. It did become obvious, however, that the topics were no longer up to date. Cochlear implants had come about, for example. And so, the new book has a dedicated paediatric section. Or, there have now been robust randomised control trials for sudden-onset hearing loss, for example, that needed to be included. Or, you can screen for hearing loss with smart phones and artificial intelligence (AI), and that needed to be included. Or, in the old days, there was a whole battery of tests you needed to do to diagnose an acoustic neuroma, but that has changed due to radical improvements in diagnostic radiology. Its management has also changed, with many patients now undergoing 'watchful waiting' with repeat radiology rather than surgery. The other advancement has been the evolution of

questionnaires that better assess the benefits or otherwise of interventions to aid the hearing.

What was the experience of writing the book like? A new edition so many years later?

My initial publisher was Butterworth, who also did *Scott Brown*, and my relationship with them had been very good. We had a new publisher for this third edition, who are very experienced in the ENT realm of publishing, but it did feel more chaotic this time round! Perhaps I am too old for the modern electronic methods of writing a book. Having Haytham Kubba and Emma Stapleton as co-authors has aided me considerably.

As we've talked, you've mentioned many names – are there people or persons, that you consider important mentors?

It's all in different ways you see… I don't think I could rank them or pick one. Many people have been valuable to me in different ways, as is true for all lives. If I had to pick one, in relation to the book, I would say Stuart Gatehouse.

Has anything else matched the microscope as a moment of precipice in surgical practice for you?

Well, actually, the technological backup we have now, the ability to take pictures with endoscopes, was a real turning point. *Otoscopy*; *a structed approach* was written with PJ Wormald who took the otoscopic coloured photographs with a camera using an ear speculum. Some of these photographs in black and white are in the text of *Audiology for Clinicians* and coloured ones in the seventh and eigth editions of *Scott Brown*.

What would you say is most exciting now in ENT?

It has to be artificial intelligence (AI) and this is likely to most apply to the radiological diagnosis of central audiological conditions.

The café has filled and emptied and filled again, and we haven't talked about George Browning's time as editor of Clinical Otolaryngology, or on RSM council and, I imagine, many other things. It strikes me, as I look back on our conversation, that medical education – academic, evidence-based medical education – was a real passion of George's. His spans a career where ENT provision and practice and education changed hugely, with technological and scientific advances. It is amazing and wonderful to trace a lifetime that has kept abreast of changes and influenced them with real drive and expertise

References

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