ENT UK

ORAL ABSTRACTS PRESENTED AT THE BRITISH SOCIETY HISTORY OF ENT 2018
ROYAL SOCIETY MEDICINE, LONDON THURSDAY 6TH DECEMBER 2018
Abstract Title: ‘It should have been me!’ - Benjamin Babington and his overlooked historical contribution to ENT practice

Main Author: Carys Rebecca Whittet

Title of Paper
'It should have been me!' - Benjamin Babington and his overlooked historical contribution to ENT practice

Objectives
Benjamin Guy Babington (1794 - 1866) was the son of a physician, William Babington. He had a somewhat colourful personal history, originally joining the Royal Navy at the age of fifteen and serving as a midshipman at the Battle of Copenhagen. He joined the East India Company becoming an Oriental scholar and publishing the first grammar of the Indian language, Tanul. Ill health forced his return to England where he studied medicine at Guy's Hospital and Cambridge and became Assistant Physician at Guy's in 1837. Babington was an amiable and sociable man who believed that furthering science was more important than achieving personal fame. He was multi talented, being a skilled sculptor, painter, linguist and translator of verse. On entering medicine he became interested in organic chemistry, haematology and epidemiology.

In 1829 at a meeting of the Hunterian Society in London he presented an instrument called the glottiscope designed to visualise the fauces, epiglottis and larynx. This instrument is very much like the laryngeal mirrors still in use today and was used by Dr Babington for several years in clinical practice. Manuel Garcia, an eminent Spanish singing teacher, has however been credited for inventing an instrument to examine the vocal cords, thirty years later.

In 1865 he described the condition of multiple telangiectasia, which was later given the eponymous name of Osler, Weber, Rendu disease some 30 years or so later, and is now known as hereditary haemorrhagic telangiectasia. This presentation outlines Babington's overlooked contributions to ENT history.

Methods
see objectives above

Results
see objectives above

Conclusions
see objectives above

References (minimum of 2 required - not included in the wordcount)

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247
Stroboscopy is a key component of clinical voice evaluation, allowing direct observation of vocal fold oscillation. Whilst modern technological advancements promote the utilisation of stroboscopy within state-of-the-art medical devices, the principles of stroboscopy have a long and detailed history.

Stroboscopic principles date back to the 1800s, with the discovery that visual perception of motion can be depicted from a montage of multiple images. Roget described the phenomena as a “curious optical deception” when analysing the spokes of a rolling carriage wheel when viewed through vertical apertures. During this era, many philosophical toys were created based on this principle, providing amusement and sparking scientific interest. These included the camera obscura, phenakistiscope, zoetrope, and zoopraxiscope.

The stroboscope was a precursor to motion pictures, and the advent of cinematography allowed sequences of still images to be projected in succession, demonstrating movement.

The earliest mechanical stroboscope developed for examination of the larynx was published by Oertel in 1895. In this device, a persistent light source was projected through slits in a rotating wheel, and a series of mirrors directed the light onto the patients vibrating vocal folds. By maintaining a constant pitch phonation, the rotation of the wheel was manually adjusted to match the speed of vocal fold vibration and produce a slow-motion representation of vocal fold movements.

Today's videostroboscopy and fibreoptic imaging technology allows high speed real-time imaging of vocal fold oscillations and integrates historical stroboscopic principles with modern video-based technologies; demonstrating the clinical application of the “curious optical deception” in modern medicine.

References (minimum of 2 required - not included in the wordcount)

1. Roget PM. Explanation of an optical deception in the appearance of the spokes of a wheel seen through vertical apertures. Philosophical Transactions of the Royal Society of London. 1825;115:131-140.

Please specify your wordcount below: maximum is 250 (not included references)

250
Abstract Title: Amber: history’s unlikely panacea(r) for conditions affecting the ear, nose and throat.

Main author: Lilia Dimitrov

**Title of Paper**
Amber: History’s unlikely panacea(r) for conditions affecting the ear, nose and throat.

**Objectives**
In 1993, Steven Spielberg imagined that a mosquito embedded in amber could be used to resurrect tyrannosaurus rex, but for 2 millennia a range of no less miraculous claims have been made about amber’s ability to treat almost every disorder of the ear, nose and throat. It was amber’s distinctive colour, described by the ancient Greek historian Nicias as the "essence of the congealed rays of the setting sun", that made people believe in its health giving properties. For instance, Pliny writes of women in ancient gaul adorned with amber amulets to ward "against tonsillitis and other affections of the pharynx"; mixing amber with rose oil to treat ear ache and wearing amber collars for protection against unsightly goitres "about the fleshy parts of the throat". This medical tradition continued from Roman times through to the present day, seeing amber transformed into a variety of different preparations from powders and plasters to balsams and poultices. Some treatments had their origins in scientific ideas of the time but in other cases these so-called cures were nothing more than quackery. In this presentation, the author will describe the unexpected ways that amber has been used to treat the maladies of the ear, nose and throat, embarking on a journey through history that sees medicine, myth and legend intersect.

**Methods**

**Results**

**Conclusions**

**References (minimum of 2 required - not included in the wordcount)**

Please specify your wordcount below: maximum is 250 (not included references) 228
Abstract Title: Dr Jako – Jack of all trades, master & innovator of ENT

Main author: Tiffany Munroe-Gray

Title of Paper
Dr Jako - Jack of all trades, master & innovator of ENT

Objectives

Dr Geza J Jako (1930 - 2015)

A Hungarian revolutionary raised in a family of ENT surgeons, Dr Jako went on to father many of the most significant developments in the field.(1)

After organising the medical care for patients during the 1956 Hungarian revolution (for which he later received a Knighthood), he fled the communists via a US Naval boat.

On completing his ENT specialty training at Harvard, Dr Jako became a Professor in Biomedical Engineering. Not only did he then become specialist advisor for cancer to Presidents Reagan and Bush (Sr), he developed a number of novel devices and ideas;

Methods

Cochlear implants:1962 - The first to implant two electrodes into a cochlear.(2)


Image guided surgery:1984 - he published his concept of combining different imaging modalities to improve diagnosis and surgery. He then went on to co-publish the new concept of MRI-Guided interstitial laser therapy leading the way for image guided surgery.(4)

Keyhole surgery:Endoscopic laser use steered Dr Jako towards developing instruments for minimal access surgery leading to the enhancement of Keyhole Surgery.

Results

Conclusions

With 7 US patents and over 120 surgical instruments bearing his name, Dr Jako is the ‘Father of laser surgery’ and so much more.

References (minimum of 2 required - not included in the wordcount)

Please specify your wordcount below: maximum is 250 (not included references) 249
Abstract Title: From the prism to the scope, shining a light on the development of narrow-band imaging.

Main author: Oskar Terling

Title of Paper
From the prism to the scope, shining a light on the development of narrow-band imaging.

Objectives
Humans have long been fascinated by the idea of being able to observe their bodies in ever greater detail. A century after the first capture of a photographic image, the innovation of fibreoptic endoscopy in 1957 allowed viewing of the inner workings of the gastrointestinal tract. The technology improved, miniaturized and branched out to ENT where laryngoscopes and endoscopes were developed for the use in the nose and throat. The technology has continued to advance, and at the turn of the millennium, the next leap forward came in the form of narrow-band imaging (NBI).

In 1999, Dr Kazuhiro Gono and Dr Yasushi created a specialised filter which allowed them to manipulate wavelengths of light to enhance the vascular networks in the mucosa of Dr Gono's tongue. Centuries after Newton used a prism to separate light into all its colours, they were able to manipulate that light for the betterment of the species. This technology allowed for easier detection of cancer by observing subtle changes in the microvasculature of the mucosa. Soon NBI exploded in popularity, with the first commercial scope being released in 2005. It went on to be useful in the oropharynx, then the larynx, and by 2011 had been used to detect cancer in the nasopharynx by Lin and Wang.

As our desire to capture our anatomy endures, the technology behind NBI continues to improve. However new developments, such as blue laser imaging, continue to push boundaries and the field of medical imaging in ENT continues to grow.

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References (minimum of 2 required - not included in the wordcount)


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250
Abstract Title: John Shore's “Pitch” Fork: The Evolution of the Tuning Fork in Music and Medicine

Main Author: Richard William Brown

Title of Paper
John Shore's “Pitch” Fork: The Evolution of the Tuning Fork in Music and Medicine

Objectives
In 1711 John Shore the accomplished Trumpeter to the Royal Court and favourite of Handel, invented the Tuning “Pitch” Fork which allowed superior tuning of string musical instruments. Before this, standard pitch relied on wooden pitch-pipes which were unreliable being affected by changes in temperature and humidity. The instrument was instantly popular across Europe and eventually its use culminated in a meeting in 1939 at the British Broadcasting House in London to decide the International Standard for Concert pitch. The European powers agreed on A=440Hz. It was one of the last things they would agree on before the outbreak of WW2. The medical applications of the tuning fork were not realised until over a century after its invention. In 1845, Schmalz a German Otologist introduced the tuning fork to Otology. He was the first to recognise the clinical implications of Weber's earlier work in 1834 on the phenomenon of lateralisation of bone conduction in the occluded ear. Sadly, his discovery passed unnoticed in his lifetime and the test remained Weber's eponym. In 1855, Rinne a German Physician described his classical test in a Physiology Treatise of the ear. Interestingly he had also overlooked the clinical implications and mentioned these only as a footnote. Lucae and Bezold in 1880 adapted his work for clinical use. This presentation will explore the colourful history of the Tuning fork and its place in Modern Otological Practice. In the era of easily accessible audiometry are Tuning Forks still an indispensable diagnostic tool for the Otologist?

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References (minimum of 2 required - not included in the wordcount)


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250 (not including Title)
Laryngomalacia - evolution of theories of aetiology and management

Main Author: Alok Rathi

Objectives
To study the history of laryngomalacia.

Methods
Literature review using various search engines.

Results
Infantile stridor is alarming, both for parents and clinicians. Laryngomalacia is the most common cause of infantile stridor, being the cause of noisy breathing in 45-70% infants presenting to physicians. Despite having such high incidence, it was first described in a French textbook of paediatrics by Rilliet and Barthez in 1853. (1) It was accurately described in 1892 by John Thompson, based on Lees’ description of symptoms in 1883. (2) Various theories were proposed in late 18th century about aetiology of laryngomalacia including adenoid vegetations (Eustace Smith, Robertson), compression by enlarged thymus gland (Avellis and Hochsinger), malformation of larynx (Sutherland and Lack), improper coordination of respiratory movements (John Thompson, Logan Turner). (3) The term "laryngomalacia" was first proposed by Chevalier Jackson in 1942. The first half of 20th century witnessed parallel studies about natural history of laryngomalacia along with its aetiology. A few decades later, the focus of research shifted again to aetiology, in the era of evidence-based medicine. Thus, a neurologic theory was proposed followed by reflux theory, and then multifactorial theory. The second half of the 20th century witnessed a dramatic evolution in management of this condition from observation with no definite treatment, through tracheostomy to the present supraglottoplasty. All these developments were supported by technological advances across several continents. (4)

Conclusions
History of laryngomalacia has extensive aetiological theories and wide spectrum of management.

References (minimum of 2 required - not included in the wordcount)
2. Thomson J. On infantile respiratory spasm (congenital laryngeal stridor). Oliver and Boyd; 1892.

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241
Title of Paper
Nystagmus, Erasmus and Wells: a public dispute and a forgotten physician.

Main author: Patrick Holden

Objectives

Methods
Erasmus Darwin (1731 - 1802), renowned polymath, physician and grandfather of Charles, is often credited with the discovery of nystagmus in 1794 (Lueck 2005; Bender & Shanzer 1983). However, two years earlier, a description of this phenomenon was published by an astute but lesser known physician, William Charles Wells (1757 - 1817). A very public dispute followed between the two writers concerning the relationship between eye movements and vertigo, for which they became sometime known as the "vertiginous philosophers" (T.J. 1794).

Darwin devoted an entire chapter to vertigo in his medical compendium Zoonomia (Darwin 1794). Expanding on the work of his son, Robert, he incorrectly concluded that post-rotatory eye movements resulted from an inability to foveate moving "spectra" (after-images) generated during rotation itself; for Darwin the resulting "giddiness" was due to visual disturbances in the same way that he perceived other sensory disturbances would cause vertigo (Wade 2005).

Like Darwin, Wells also experimented with spectra and this was instrumental in his initial description of nystagmus (Wells 1792). Following the publication of Zoonomia, Wells wrote to the Gentleman's Magazine with evidence to counter Darwin's observations (Wells 1794a; Wells 1794b) as did other notable contemporaries (Brown 1798). Despite these criticisms Darwin continued to posit post-rotatory vertigo as a result of the "irritative motions of the sense of vision" (Darwin 1801).

This oral abstract will further describe the observations of these two men of letters and seek to explain why Wells is largely forgotten despite a more timely and accurate description of vestibular-induced nystagmus.

Results

Conclusions

References (minimum of 2 required - not included in the wordcount)
Wells, W.C., 1792. An essay upon single vision with two eyes : together with experiments and observations on several other subjects in optics.

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**Title of Paper: Myron Metzenbaum**

**Main author: Michael Walsh**

**Objectives**

Born in 1876 in Cleveland, Ohio to successful linen merchants, Metzenbaum attended medical school in Wooster University in Cleveland. Here he met one of his mentors throughout his career, Dr. George Crile who was an innovator of the radical neck dissection and a prolific thyroid surgeon. Metzenbaum resided in St. Alexis hospital for his undergraduate years where he often acted as an anaesthesiologist developing techniques in drop ether anaesthetics, that would remain best practice for 50 years. He further developed his vast array of skills with trips to Europe in the early 20th century where he wrote extensively on radium to treat medical disorders. Necessity in improvement of the Cleveland ambulance service led to development of a model that was implemented throughout the country to which Metzenbaum played an intricate role. He became a member of the American Board of Otolaryngology in 1910, he had particular interest in repair of traumatic injuries involving the nasal septum and described techniques for replacement of the lower end of the dislocated septal cartilage versus submucosa resection of the dislocated end of the septal cartilage which was published in 1929. He is probably most famous for his development of the Metzenbaum scissors which he developed for tonsillectomy and purposely left unpatented for his colleagues to develop further and refine. This is one of the many examples that depicts that of a caring and innovative surgeon whose contribution to surgery is utilised daily in operating theatres throughout the world.

**Methods**

**Results**

**Conclusions**

**References (minimum of 2 required - not included in the wordcount)**


M. Metzenbaum. Radium its value in medicine- Canadian practitioner and review 1905:20;548-51. Please specify your wordcount below: maximum is 250 (not included references) 244
Abstract Title: Paediatric Tracheotomy: a story of Egyptian tablets, gold coins and much more recent history

Main author: Eleanor Crossley

Title of Paper
Paediatric Tracheotomy: a story of Egyptian tablets, gold coins and much more recent history

Objectives
Tracheotomy is one of the oldest surgical procedures in history; it has been portrayed on Egyptian tablets from 3600 BC, and the first recorded tracheotomy is thought to have been performed by Asclepiades of Persia in the second century BC1. However, the first successful paediatric tracheotomy was not recorded until 1620, when Nicholas Habicot saved a 14-year-old boy who had tried to swallow a bag of gold coins to prevent their theft2. Initially tracheotomy remained primarily an emergency management for airway foreign bodies in children. However, in 1808 the first tracheotomy was performed on a child with diphtheria, and in 1833 Trousseau reported saving 50 children with diphtheria through the use of tracheotomy. More importantly he discussed the importance of good post-operative care and surgical technique in reducing mortality and morbidity - values which hold true today. Surgeons identified a role for tracheotomy in other conditions such as poliomyelitis, but it was only in 1965 that its use in long-term ventilation was first described. Although its role in managing airway foreign bodies remains relevant centuries later, the wider uses of tracheotomy are a part of much more recent history. We review the notable surgeons who have revolutionised the use of tracheotomy in children and also comment upon advances in tracheostomy design and education which have enabled children to be discharged home with tracheostomies, rather than being subjected to life in hospital.

Methods

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References (minimum of 2 required - not included in the wordcount)

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230
Abstract Title: Professor Fritz Buchthal, ‘The Heroic Age of Clinical Neurophysiology’ and Laryngeal Electromyography

Main author: Morad Faoury

Title of Paper
Professor Fritz Buchthal, 'The Heroic Age of Clinical Neurophysiology' and Laryngeal Electromyography

Objectives
Professor Fritz Buchthal, 'The Heroic Age of Clinical Neurophysiology' and Laryngeal Electromyography Morad Faoury, David Allen, Kate Heathcote, Andrea Burgess, Hasnaa Ismail-Koch

In the 1950s Professor Buchthal together with Dr Faaborg-Anderson were the first to use electromyography to assess the role of the laryngeal nerve and muscles in vocalisation. Experimental studies involved inserting needle electrodes into the intrinsic muscles of the larynx. Both investigators may have been experimental subjects for their own studies. Applications that have since been developed using laryngeal electromyography, include the diagnosis and prognosis of vocal fold immobility, evaluation of neuromuscular disorders of the larynx and perioperative laryngeal nerve monitoring. This diagnostic and prognostic information can help determine timing for definitive procedures such as laryngeal reinnervation.

Of Dutch Jewish origin Fritz Buchthal was born and educated in Germany. He worked both as a shoemaker’s aide and a college cleaning assistant at night to support his studies. His research activities spanned 47 years, resulting in three hundred and seven publications. Whilst his career is exceptional both in longevity and productivity, the career of Fritz Buchthal and his story is truly remarkable in that it included two periods of forced exile from his native Germany. In 1925, he commenced medical school at the University in Freiburg im Breisgau. A year later, he fled to California in protest of the rising of the ‘Deutsche Nationalismus’. His second period of exile was from his adopted Denmark due to the threat to Danish Jewry. In 2002 Buchthal received a lifetime achievement award from the World Federation of Neurology in recognition of an outstanding contribution to advances in the understanding of neuromuscular disorders.

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Results

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References (minimum of 2 required - not included in the wordcount)

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Words 247
Abstract Title: Professor Maurice Sourdille: destined to treat the sourds

Main author: Quentin Bonduelle

Title of Paper
Professor Maurice Sourdille: destined to treat the sourds

Objectives
Professor Maurice Sourdille (1885-1961) is best known for his impact on the treatment of otosclerosis in the pre-antibiotic era. He was the pioneer for successfully permanently restoring hearing in patients with otosclerosis, with a controversial two-staged, aseptic procedure: the "fenestration". This paper explores his life and his forgotten contributions to ENT.

Methods
Sourdille was born on the 25th October 1885, the youngest of six. Growing up in Nantes, France, he studied medicine there and then in Paris. Excluding his family, his early influences were from his teachers and mentors: Morestin and Lermoyez. The former, regarding flap reconstruction. The latter, regarding functional otological surgery. This was the subject of his thesis in 1915. In 1921, he was made Professor of Surgery at the School of Medicine, Nantes, after The Great War.

Results
Jenkins, Bárány and Holmgren experimented with fenestration techniques for otosclerosis in the early 1900s, but discontinued their work after limited outcomes. Sourdille believed that this related to the closure of the fenestra and infection. The "fenestration"; for otosclerosis was perfected from 1921, alongside his development of microscopic ear surgery. By 1935 he presented a case series of over 300 cases at the Congress of Oto-Rhino-Laryngology, Paris.

Conclusions
Professor Maurice Sourdille's advances were ground-breaking in the management of otosclerosis and functional otological surgery, in a period of war and in the pre-antibiotics era. With such a surname, he was destined to treat the hearing impaired: "sourd" in French, meaning deaf.

References (minimum of 2 required - not included in the wordcount)

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