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Proceedings of the 134th Semon Club, 23 November 2007, Otolaryngology Department, Guy's and St Thomas' NHS Foundation Trust, London, UK

Chairman: Miss Elfy B Chevretton, Consultant ENT Surgeon, Guy's and St Thomas' NHS Foundation Trust.
Pathologists: Professor Leslie Michaels and Dr Ann Sandison, University College London.
Radiologist: Dr Steve Connor, Consultant Radiologist, Guy's and St Thomas' NHS Foundation Trust.
Secretary: Mr Anil Joshi, Senior House Officer, Otolaryngology, Guy's and St Thomas' NHS Foundation Trust.
A prize was awarded for the best presentation of the meeting, to Mr Sadi Husain.

Otology and skull base session

Chairman: Mr A Fitzgerald-O'Connor

A case of otitis media associated with abducens nerve palsy and sensorineural hearing loss

G Ninkovic, N Bohm, D Jiang
From Guy's and St Thomas' Hospital, London, UK.

Introduction

Gradenigo's syndrome is characterised by acute suppurative otitis media, pain in the distribution of the trigeminal nerve and abducens nerve palsy. We present a patient who developed Gradenigo's syndrome associated with sensorineural hearing loss.

Case report

A two-year-old girl presented with an eight-day history of fever, right-sided otalgia and otorrhoea. Despite a five-day course of erythromycin, clinical examination revealed acute suppurative otitis media with tenderness over the right mastoid bone. In the absence of a subperiosteal abscess, the patient was commenced on intravenous metronidazole and augmentin. Four days later, the patient developed a right abducens nerve palsy and unsteadiness.

Radiological findings

Computed tomography scanning showed opacification of the right middle-ear cleft, mastoid cavity and petrous apex. Magnetic resonance imaging showed enhancement of the dura adjacent to the petrous bone, the internal auditory canal and the basal turn of the cochlea.

Auditory assessment

Auditory brainstem response audiometry (ABR), conducted two months after the onset of symptoms, showed a profound, right-sided, sensorineural hearing loss. Tympanometry showed bilateral type A responses at the time of the ABR.

Management

The patient was treated with prolonged antibiotic therapy supervised by a microbiologist. Further scans showed resolution of the dural and cochlear enhancement. There was complete recovery of the abducens nerve palsy.

Conclusion

It is rare nowadays for acute suppurative otitis media to be complicated by a 'dead ear' due to both cochlear and internal auditory canal involvement. This case demonstrates that Gradenigo's syndrome can be successfully treated with prolonged antibiotic therapy, thereby avoiding the potential complications associated with extensive surgery.

Management of osteoradionecrosis and osteomyelitis of the skull base following stereotactic radiotherapy for meningioma

N Bohm, G Ninkovic, D Gillett
From Guy's Hospital, London, UK.

Introduction

This report discusses a patient who had multiple surgical procedures and radiotherapy for residual meningioma. She developed osteoradionecrosis and osteomyelitis of the skull base, which were resistant to conservative treatment.

Case report

A 63-year-old woman with a left petrous apex meningioma underwent a lateral craniotomy and subtotal excision in 1995. Disease progression led to further surgical resection and post-operative stereotactic radiotherapy in 1998 and 2003. In 2006, debulking of the tumour via an orbitozygomatic approach was required in order to avoid further neurological deterioration (right-sided hemiparesis). Post-operatively, the patient developed offensive otorrhoea with visible necrotic bone in the external auditory canal. Despite long-term antibiotics, topical therapy and regular aural toilet, the discharge persisted. Imaging confirmed progressive osteoradionecrosis and osteomyelitis. Failure to respond to further aggressive antibiotic therapy necessitated surgical debridement.

Radiological findings

Serial skull base computed tomography scans showed progressive rarefaction and destruction of bone with coalescence within the left mastoid extending into the zygomatic root and the occipital condyle, suggestive of osteoradionecrosis and osteomyelitis.

Management

A subtotal petrosectomy with a rectus abdominis flap reconstruction was undertaken. Lifelong antibiotics were recommended.

Conclusion

While there is a role for antibiotic treatment in the management of skull base osteomyelitis, this is often ineffective. Disease progression is almost inevitable and life-threatening. In this patient, early surgical debridement was preferable. We recommend that this be considered in any patient with progressive disease. Radiological follow up was planned, but unfortunately the patient died several weeks after surgery due to a chest infection.

We thank Professor Gleeson for allowing us to present this case.

Transcranial interference causing feedback with bilateral bone-anchored hearing aids

S Yelnoorkar, P Stimpson, M Rothera

From the Hope Hospital, Manchester, UK.

Introduction

There has been a recent trend towards bilateral bone-anchored hearing aid (BAHA) provision, as this allows better sound localisation and speech recognition and overcomes the 'blind area'.

Case report

A 77-year-old man with chronic otitis externa, bilateral ear canal stenosis and a mixed hearing loss was managed successfully with a right-sided BAHA. After 17 years, he sought a left-sided BAHA. Unfortunately, three months later he reported feedback when using both aids simultaneously.

Findings and management

On examination, both abutment sites were secure, appropriately positioned and healthy. Feedback occurred with various Divino® aids and with the Intenso® model. Swapping the aids did not stop feedback. A computed tomography scan did not demonstrate any cranial abnormality.

Turning off either aid or reducing the volume on both aids immediately stopped the feedback. However, the patient complained about reduced amplification and preferred to use one aid on maximum volume. Reducing the low tone setting on both aids reduced but did not eliminate feedback.

We propose that bilateral BAHAs have a potential to interact with one another via the titanium implants and to cause problematic feedback. This may be due to the low cross-skull attenuation of sound. This theory is supported by the absence of feedback when using a contralateral headband, where attenuation is greater due to soft tissue.

Conclusion

Feedback should be considered when fitting patients with bilateral BAHAs. We believe this phenomenon will become commoner as more patients with poor cochlear function are fitted with binaural aids.

Unilateral otorrhoea following a blast injury

M Zackaria, S Latis, A Narula

From St Mary's Hospital, London, UK.

Case report

A 33-year-old Afghani man presented with a chronic history of left-sided otorrhoea. He had sustained a shrapnel injury to the left side of the face in Afghanistan eight years previously following a bomb blast. He had undergone a left radical mastoidectomy in Pakistan four years ago, and had been under the care of another ENT department previously for regular suction clearance. He consulted us regarding the options for his further management.

Radiological findings

A computed tomography scan of the petromastoids demonstrated two metallic foreign bodies on the left side. The first was in the middle ear extending from the left lateral pterygoid plate and medial to the mandibular condyle, extending superiorly into the middle cranial fossa and involving the temporal lobe. The fragment abutted the internal carotid artery. A second fragment was inferomedial to the angle of the mandible and adjacent to the carotid artery.

Discussion

Following a blast injury, one must consider the possibility of a foreign body causing otorrhoea. Surgical removal has significant risks, which must be discussed with the patient. Mr A Fitzgerald-O'Connor commented that topical therapy may not improve the discharge in the presence of foreign bodies. Dr Steve Connor recommended formal angiography instead of magnetic resonance angiography in order to assess the condition of the carotids if any surgical procedure were to be considered. The forum recommended surgical exploration in view of the unlikely resolution of the otorrhoea with medical treatment.

A rare cause of recurrent, unilateral otitis media

B Fu, C E B Giddings, G Mochloulis

From the Lister Hospital, East and North Hertfordshire NHS Trust, Hertfordshire, UK.

Introduction

Unilateral otitis media with effusion (OME) requires evaluation of the post-nasal space in order to exclude malignancy. Intracranial lesions altering eustachian tube function may also cause unilateral OME.

Case report

A 40-year-old woman presented with left-sided otalgia and unilateral OME. Examination of the post-nasal space was normal. Grommet insertion was abandoned intra-operatively due to discovery of a large middle-ear polyp, which was biopsied.

Radiological findings

A computed tomography (CT) scan showed opacification of the middle ear and mastoid air cells. As the patient had no symptoms or signs of intracranial sepsis, magnetic resonance imaging (MRI) was recommended to investigate the discrepancy between clinical and radiological findings. The MRI with contrast concurred with the CT, but also showed an epidural collection along the inferior aspect of the cerebellum. In addition, a large skull base meningioma was found, with extensive infiltration of the temporal bone and intracranial extension. Dr Steve Connor agreed with these findings.

Histological findings

Histological analysis of the aural polyp showed a meningioma which stained positively with EMA and vimentin. Prof Leslie Michaels confirmed these findings.

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Management

A multidisciplinary team of neurosurgeons, ENT surgeons and oncologists decided upon a conservative approach, as it was felt that surgical intervention would be too extensive and disfiguring. Future re-imaging was scheduled.

Conclusion

Meningioma infiltrating the temporal bone may mimic unilateral 'glue ear'. Computed tomography is the primary imaging modality for the petrous temporal bone. Magnetic resonance imaging should be considered as a second line investigation in unusual or suspicious cases, in order to identify rare intracranial causes.

Paediatric session

Chairman: Mr Gavin Morrison

Respiratory distress in a neonate

L Nicholls, I A Bruce, I Hore

From the Evelina Children's Hospital, St Thomas' Hospital, London, UK.

Background

Respiratory distress in neonates may result from obstruction at any level of the airway. Neonates are obligate nasal breathers, and any degree of obstruction at this level can produce significant airway compromise. Such obstruction may be due to anatomical narrowing of the nasal airway, either bony (choanal atresia or piriform aperture stenosis) or mucosal (neonatal rhinitis), or obstruction of the lumen by a polypoid lesion.

Case report

A term infant was intubated shortly after birth for respiratory distress with stertor and intermittent cyanosis. A 'fleshy lesion' was noted in the pharynx at intubation.

Radiological findings

Magnetic resonance imaging revealed a well defined, oblong mass occupying the lower nasopharynx and extending into the oropharynx. The mass was predominantly composed of tissue giving a high signal on T1-weighted sequence. There were no signs of infiltration of adjacent structures. The differential diagnosis included an epidermoid cyst, teratoma and lipoma.

Histological findings

Histological analysis revealed a hairy polyp (mature teratoid tumour).

Management

The child was intubated and transferred to our institution. A polypoid lesion was excised in theatre under direct vision using a 120° Hopkins endoscope. No other airway abnormality was detected. Intra-operatively, a soft mass was found arising from the superior aspect of the soft palate. The patient was successfully extubated the following day.

Conclusion

This case illustrates a rare cause of neonatal respiratory distress. Such tumours are very rare in this age group, and surgical excision is the treatment of choice. Subsequent recurrence is rare. The possibility of associated congenital anomalies should be considered.

Respiratory distress in the neonate: management of a large oropharyngeal mass

S Maskell, L Cochrane

From the Great Ormond St Hospital for Children, London, UK.

Introduction

We present the case of a child born with a large oropharyngeal mass and multiple associated anomalies of the upper airway, resulting in respiratory distress. We aim to highlight the management issues in the neonate with a large oropharyngeal mass.

Case report

A female infant was diagnosed antenatally with an oropharyngeal cyst arising from the palate. At birth, she was found to have a large mass extending from the maxilla and filling the oral cavity, complete clefting of the palate and mandible, as well as hypertelorism, retrognathia, and a thyroglossal cyst.

Radiological findings

Computed tomography scanning demonstrated a mass arising from the sphenoid, containing fat and rudimentary tooth formation. The mass connected with the anterior cranial fossa, with no intradural connection.

Histological findings

Histological analysis revealed a multilobulated mass covered with epithelium and hair. There were elements of adipose, fibrous and disorganised neural tissue. The histopathological appearance was felt to be consistent with a teratoid lesion.

Management

At birth, the infant had respiratory distress secondary to upper airway obstruction. The airway was successfully managed with a combination of positioning, nasopharyngeal airway and continuous positive airways pressure. Microlaryngobronchoscopy revealed a rudimentary epiglottis and a normal distal airway. The mass was debulked, resulting in significant improvement in the airway. At the time of writing, the child was awaiting palate repair and thyroglossal cyst excision.

Conclusions and lessons learned

Oropharyngeal masses can lead to airway obstruction, which can be anticipated with prenatal screening. This complicated case required multidisciplinary management involving ENT and cleft surgeons and allied healthcare professionals.

A paediatric patient presenting with a mass in the left nasal cavity

M Morgan, I Pai, P Spraggs

From the North Hampshire Hospital, Hampshire, UK.

Introduction

Sinonasal neoplasms in children are uncommon, and the differential diagnosis includes tumours that are encountered in adults as well as specific paediatric malignancies.

Case report

A 10-year-old boy presented with a month's history of recurrent epistaxis and nasal obstruction due to a mass inside the left nostril which caused broadening of the nasal dorsum. Serological investigations showed a raised Epstein–Barr virus immunoglobulin M antibody titre. Magnetic resonance imaging and computed tomography

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scanning showed a mass in the left sinonasal cavity causing bony erosion. Biopsies obtained under general anaesthetic revealed an admixture of atypical lymphoid cells, areas of necrosis and an extensive inflammatory infiltrate. Immunohistochemical analysis confirmed T-cell lineage and CD56 positivity, an immunophenotype consistent with a natural killer T-cell lymphoma of nasal type.

Management

The patient commenced four cycles of chemotherapy followed by localised radiotherapy. Subsequently, he remained in remission.

Discussion

Prof Leslie Michaels highlighted the historical inconsistencies in both the diagnostic criteria and the terminology used to identify this condition, resulting in repeated misdiagnosis that has been detrimental to patient survival. Former nomenclature has included Stewart's lethal midline granuloma and Wegener's granulomatosis. The development of immunohistochemical techniques has revolutionised our diagnostic capabilities.

Natural killer T-cell lymphoma of nasal type is an Epstein–Barr virus associated non-Hodgkin's lymphoma. It is rare in western countries and usually presents in the fifth decade. Very few cases have been reported in children.

Due to the diverse presentations of lymphoma in the paediatric population, it is important to consider early imaging and adequate biopsy in order to facilitate definitive diagnosis.

Beware the painful, midline neck mass in a child

R Sharma, T Odutoye, H Daya

From St George's Hospital, London, UK.

Introduction

An eight-year-old girl presented to a district general hospital with a painful, midline neck lump. As ultrasonography and magnetic resonance imaging suggested a thyroid malignancy, she was referred to the oncologists at the Royal Marsden Hospital, who transferred her care to the paediatric surgeons at St George's Hospital for thyroidectomy. The paediatric surgeons arranged a fine needle aspiration (FNA) under general anaesthetic, with an option to proceed to thyroidectomy. At the time of the procedure, the thyroid mass was noted to have significantly reduced in size.

Investigations and management

The FNA biopsy suggested lymphocytic thyroiditis in keeping with Hashimoto's disease. However, thyroid function tests were normal and thyroid autoantibodies were negative. The patient was subsequently referred to a paediatric endocrinologist who opted for a watch-and-wait policy. Six weeks later, the thyroid mass flared up again. Repeat ultrasonography and computed tomography suggested the presence of a tract. The patient was then referred to the paediatric ENT surgeons. Endoscopy confirmed a third branchial arch anomaly running from the left thyroid lobe to the left piriform fossa. The patient underwent endoscopic cauterisation of the sinus tract.

Conclusion

What was originally thought to be a thyroid tumour turned out to be an anatomical anomaly. The lesson here is to beware operating on neck masses in children in the absence of cytology or contemplation of the possibility of congenital anomalies.

Comments

Prof Leslie Michaels questioned whether the anomaly was, strictly speaking, of fourth branchial arch origin; however, Mr Daya confirmed that it was a third branchial pouch anomaly.

Upper aerodigestive tract symptoms in a 12 year old

K Young, I A Bruce, I Hore

From the Evelina Children's Hospital, St Thomas' Hospital, London, UK.

Background

Tumours are a rare cause of upper aerodigestive tract symptoms in children.

Case report

A 12-year-old boy presented with a four-week history of hoarseness, dysphagia and weight loss. Following a provisional diagnosis of a vocal fold cyst, he underwent an elective microlaryngobronchoscopy. Anaesthetic induction precipitated complete airway obstruction caused by an unsuspected large pharyngeal mass. After a difficult intubation, the patient was retrieved to our tertiary referral centre for further management.

Radiological findings

Computed tomography scanning showed a 3 cm diameter, homogenous, soft tissue pharyngeal mass with no cervical lymphadenopathy or bony involvement. The differential diagnosis included lymphoma, rhabdomyosarcoma and neurofibroma.

Management

Examination of the pharynx under anaesthesia showed the mass filling the oropharynx, with extension into the nasopharynx. The mass arose from the lateral aspect of the hypopharynx inferior to the posterior tonsillar pillar. The bulk of the mass was removed using bipolar diathermy forceps. The child was successfully extubated the following day.

Histological findings

Prof Leslie Michaels agreed with the diagnosis of synovial sarcoma (biphasic type, containing epithelioid and spindle cells). The tumour extended to the deep excision margin.

Further management

Following paediatric oncology review, the child was entered into a European chemotherapy trial.

Conclusions and lessons learned

This case illustrates a rare cause of upper aerodigestive tract symptoms in a child. Synovial sarcomas are considered to be high grade and should be referred to a unit with sufficient experience in the management of soft tissue sarcomas. Fibreoptic pharyngolaryngoscopy is recommended in the outpatient clinic to identify the 'difficult airway' pre-operatively.

Rhinology session

Chairman: Mr David Roberts

Recurrent epistaxis in a pregnant 40-year-old woman with no significant past medical history

S Husain, R Harris, A Toma

From St George's Healthcare NHS Trust, London, UK.

Introduction

We report a case of a spindle cell lesion presenting with epistaxis, which had not been clearly defined histologically.

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Case report

A 26-week pregnant woman was seen for recurrent epistaxis. She subsequently presented post-partum with left peri-orbital oedema. A non-contrast computed tomography (CT) scan of the sinuses was performed and a left nasal polypoid mass was biopsied.

Radiological findings

The CT scan showed soft tissue in the left ethmoid sinus, with loss of bony architecture but an intact lamina papyracea. There was evidence of mild proptosis.

Histological findings

The nasal polyp and ethmoid biopsy showed a cellular mesenchymal spindle cell tumour with a rich, branching vascular network. An expert opinion suggested that the morphological and immunohistochemical features 'fitted best' with a haemangiopericytoma, which has a propensity for recurrence, especially when infiltrative.

Management

The patient underwent a functional endoscopic sinus resection. At the time of writing, she remained under review in order to identify any recurrence and the need for further surgery.

Conclusions and lessons learned

Prof Leslie Michaels commented that sinonasal haemangiopericytomas were rare and benign, but needed long-term follow up given the risks of recurrence and potential complications. Further investigations during this woman's pregnancy posed a dilemma, as many clinicians would be reluctant to perform a CT or give a general anaesthetic to a pregnant woman for a benign condition.

A definitive cause for epistaxis should always be sought. Given the complexity of this case, a multidisciplinary team approach (involving surgeons, radiologists, obstetricians and pathologists) was very important.

Diagnostic difficulty in a presumed mycobacterial infection

W Aslam, V Veer, W Wong

From Whipps Cross University Hospital, London, UK.

Introduction

Invasive fungal sinusitis rarely occurs in the immunocompetent. This case report highlights the changing clinical spectrum of the disease.

Case report

A 28-year-old man from Afghanistan presented with a 10-month history of night sweats, cough with yellow sputum, frontal headaches and 10 kg weight loss. Antituberculous therapy was instituted for a presumed mycobacterial infection. This was subsequently stopped after the patient developed a right abducens nerve palsy and hypoaesthesia over the ophthalmic distribution of the right trigeminal nerve.

Radiological findings

Magnetic resonance angiography of the head showed sphenoidal and ethmoidal sinusitis and a uniform, enhancing, right parasellar mass encasing the internal carotid artery and extending superiorly towards the subfrontal area, with a dural tail along the planum sphenoidale and cribriform plate. Computed tomography of the head confirmed bony destruction of the right planum sphenoidale.

Management

The patient underwent endoscopic transsphenoidal biopsy and debulking of the mass. Microbiological cultures grew *Aspergillus flavus*. The patient was started on oral voriconazole. His symptoms improved, and repeat magnetic resonance imaging showed significant resolution of the infection.

Discussion

Prof Leslie Michaels suggested that, taking into account the histological morphology, the invasive nature of the disease and the patient's demographics, the causative organism might have been *Coniobolus coronata*. He advised that the microbiological and histological features be re-reviewed. This confirmed *A flavus*. The case highlights the difficulty in diagnosing fungal sphenoidal disease caused by *A flavus*. Often, as in this case, disease is only recognised after complications have developed. However, the patient made good progress with voriconazole treatment.

Left facial paraesthesia with progressive ptosis of right eye

P K S Gubbi, D J Tweedie, J M Rowe-Jones

From the Royal Surrey County Hospital, Surrey, UK.

Introduction

Sphenoid sinus mycosis can have a varied presentation, including cranial nerve palsies. The diagnosis may be overlooked in a patient with known neuropathies.

Case report

A 71-year-old woman was admitted with diplopia, vomiting, frontal headaches and left maxillary paraesthesia. She had previously developed left cavernous sinus thrombosis complicating a trans-oral excision of a C2 vertebral osteoma. On admission, her right pupil was dilated and reacting sluggishly to light. There was partial ptosis and reduced movement of the right eye, which pointed inferiorly and laterally. Fundoscopy was compromised by a cataract. Praecordial examination elicited a newly diagnosed ejection murmur.

The differential diagnosis included cavernous sinus thrombosis, subacute bacterial endocarditis and a space-occupying lesion causing raised intracranial pressure.

Management

Intravenous antibiotics and low molecular weight heparin were commenced. Computed tomography and magnetic resonance imaging (MRI) studies suggested an expansile, non-erosive lesion within the sphenoid sinus. Endoscopic sphenoidotomy yielded caseous material. Symptoms and signs resolved dramatically post-operatively, and the patient was discharged.

Despite pus culture being negative, oral antibiotics were continued. Itraconazole was commenced after histological analysis demonstrated aspergillus fungal hyphae.

Post-operative course

Three weeks later, the patient developed a stroke. Computed tomography scanning showed an evolving left middle cerebral artery thrombosis, and MRI scanning excluded recurrent fungal sinusitis. Nevertheless, liposomal amphotericin was commenced. The patient was deemed unfit for a general anaesthetic, and died from an intracerebral haemorrhage.

Discussion

Prof Leslie Michaels commented that the patient probably had allergic fungal disease. Mr David Roberts felt that the middle artery thrombosis was likely to be coincidental and unrelated to the fungal sinusitis.

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Unilateral nasal obstruction and rhinorrhoea

S S Vasani, C E B Giddings, G Mochloulis

From the Lister Hospital, East and North Hertfordshire NHS Trust, Hertfordshire, UK.

Background

Nasal polyposis is common, with an incidence of 1–4 per cent. A unilateral nasal polyp can potentially represent a number of benign or malignant tumours.

Case report

A 72-year-old female non-smoker presented with a 10-month history of rapid onset, progressive, left-sided nasal obstruction and rhinorrhoea. There was no history of epistaxis. Nasendoscopy showed a left unilateral polyp occluding the nasal airway.

Radiological findings

Computed tomography scanning of the sinuses demonstrated a large polyp located in the left nasal cavity and extending into the posterior choana. Dr Steve Connor emphasised the likely origins of the mass from the roof of the nose and cribriform plate.

Management

The patient underwent functional endoscopic sinus surgery. The nasal polyp was seen to arise from the roof of the left nasal cavity medial to the middle turbinate. Polypectomy resulted in considerable haemorrhage, requiring the prolonged application of adrenaline patties and subsequent nasal packing.

Histological findings

Histological analysis revealed sheets of medium-sized cells with poorly defined cytoplasmic borders, pale eosinophilic cytoplasm and central, irregular nuclei. Staining for S-100 demonstrated sustentacular cells. The features were reported as nasal paraganglioma. However, Prof Leslie Michaels felt that the lesion was more likely to represent an olfactory neuroblastoma and questioned the diagnosis of nasal paraganglioma.

Conclusion

The nose is a rare site for paragangliomas; fewer than 30 have been reported in this location. These lesions present a diagnostic challenge to histopathologists and clinicians alike. The consensus of opinion was that the histology of this case should at least be reviewed.

Surgical closure of anterior frontal plate defect with custom-made titanium plate and endoscopic frontal sinusotomy

S M Keh, A Vats, H Saleh

From the Charing Cross Hospital, London, UK.

Introduction

Developments in modern technology have enabled newfound prospects for implant design and manufacture. Nevertheless, cranial bone defects are generally complicated and pose a challenge to implant planning and manufacture. These difficulties are partly due to the close proximity of the dura mater, orbit and sinuses. Infection secondary to graft failure can cause serious morbidity. We discuss a complex case of a frontal plate defect which required reconstructive surgery and the use of image guidance in sinus surgery.

Case report

A 42-year-old man was referred to the ENT department following a frontal plate burr hole procedure to remove a mucocele. The initial surgery, performed by neurosurgeons, had left him with a defect in the forehead.

Radiological findings

Pre-operative sinus computed tomography (CT) using the BrainLab protocol was carried out to study the outflow tract of the frontal sinus and to detect any residual mucocele. The CT showed a large amount of air in the frontal bone defect. A titanium plate was custom-made based on the measurements from the CT scans. The prosthesis was packaged and sterilised according to the standard protocol.

Management

The patient proceeded to elective closure of the anterior frontal plate defect and endoscopic left type IIa Draf frontal sinusotomy with the aid of image guidance. At follow up, the wound had healed well, with satisfactory cosmesis. There were no reported sinus symptoms or frontal headaches.

Comments

Mr David Roberts noted that image guidance has revolutionised rhinology and skull base surgery, and has a role in future ENT training.

Head and neck session

Chairman: Mr Ricard Simo

An unusual cause of an occipital mass

F Taylor, A Joshi, R Simo

From Guys' Hospital, London, UK.

Case report

A 64-year-old man presented with a three-month history of an enlarging left occipital mass. On direct questioning, he reported weight loss and two episodes of haematuria two months earlier. The ENT examination, including flexible nasendoscopy, was unremarkable. Fine needle aspiration cytology and computed tomography (CT) from the skull base to the diaphragm were arranged.

Radiological findings

The CT scan showed a large mass within the right kidney measuring 9×9.4 cm, suggestive of renal carcinoma, radiological stage T_{3A}. Apart from the obvious occipital mass, there were multiple enhancing nodes in the left neck and multiple lung metastases.

Histological findings

Fine needle aspiration cytology was initially reported as a probable neuroendocrine tumour of uncertain origin. In light of the CT findings, the histology was reviewed again. This now suggested a diagnosis of metastatic renal cell carcinoma. Dr Ann Sandison confirmed that the histology was indeed characteristic of renal cell carcinoma, but that the early diagnostic difficulty had arisen due to uncertainty over the tumour's origin.

Management

The case was discussed at the multidisciplinary meeting and with the urologists. Nephrectomy was not advised because of metastatic disease.

Conclusion and lessons learned

Ten per cent of head and neck deposits originate from infraclavicular primary tumours. Renal carcinoma metastasises to the head and neck region in 15 per cent of cases,

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and for 5 per cent of patients this is the presenting complaint. Occipital metastasis is rare, but the possibility of a renal primary needs to be considered when ENT examination is unrevealing.

A rare thyroid neoplasm with uncertain histology clouding the diagnosis

M Rose, A Joshi, J-P Jeannon

From Guy's Hospital, London, UK.

Case report

We report a case of hyalinising trabecular tumour in a 77-year-old Caucasian woman referred to us with an anterior neck swelling. Ultrasound revealed a multinodular goitre. Fine needle aspiration cytology showed features suggesting an oncocytic variant of papillary carcinoma (Thy 4).

Management

A total thyroidectomy and central neck dissection were performed. It was felt prudent to proceed via a single procedure in view of a previous history of anaesthetic complications. The post-operative recovery was uneventful.

Histology

The surgical specimen demonstrated a thinly encapsulated nodule of follicular cells with occasional trabeculae in a hyalinised stroma, suggestive of hyalinising trabecular tumour. A separate specimen of the right lobe demonstrated papillary carcinoma.

Discussion

The histological slides were reviewed at the meeting. The features supporting a diagnosis of hyalinising trabecular tumour included elongated tumour cells, a trabecular growth pattern and the presence of dense hyaline material. Immunohistochemical analysis demonstrated thyroglobulin and Thyroid transcription factor 1 (TTF1; an immunohistochemical marker for thyroid cancer) positivity, calcitonin negativity and a typical Mindbomb homolog 1 (MIB 1; an immunohistochemical marker for cell proliferation) cell membrane staining pattern.

First described by Carney *et al.* in 1987, hyalinising trabecular tumour is relatively rare. Approximately 200 cases have been reported. Hyalinising trabecular tumour has typically been considered benign. The authors of the original series in 1987 reported in 2004 that none of their cases had subsequently demonstrated malignant transformation. However, cases of hyalinising trabecular tumour with metastases or invasive growth into the surrounding tissue have been described. These frequently present in tandem with micropapillary carcinoma. The meeting felt that genetic testing for RET (Rearranged during transfection proto-oncogene. A genetic marker for thyroid cancer) gene mutation would be useful in such cases.

Distracting neck lumps

R J Glore, C Ferdinand, T Jacob

From the University Hospital Lewisham, London, UK.

Background

Tuberculosis is enjoying a resurgence in the western hemisphere. Multi-drug regimes provide the mainstay of treatment. The management of well differentiated thyroid carcinoma is well established in the UK, with published national guidelines. We present a case in which both diagnoses were made simultaneously, creating a management conundrum.

Case report

A 64-year-old Malaysian woman presented with a month's history of an enlarging, right-sided, level IV–V cervical mass. Fine needle aspiration (FNA) in the clinic revealed pus containing acid-fast bacilli. The patient was commenced on the appropriate multi-drug anti-tuberculosis treatment. Ultrasonography, coupled with FNA, revealed a 2.4 cm, left thyroid nodule with microcalcification and ipsilateral level II–III lymphadenopathy. The features were highly suggestive of papillary carcinoma. A chest computed tomography (CT) scan demonstrated mediastinal lymphadenopathy of unknown aetiology.

Discussion

An early total thyroidectomy and selective neck dissection in the presence of tuberculosis would carry with it a high risk of wound complications and fistula formation. Also, we know from experience in pregnant patients with papillary thyroid carcinoma that surgery can be safely delayed without adverse consequences. However, given the patient's age and the stage of the thyroid carcinoma (T_2 N_2 M_x), waiting until the tuberculosis was fully treated may have worsened her prognosis.

Management

After discussing the patient at the regional multidisciplinary meeting, we decided to delay definitive surgery and to continue with anti-tuberculous treatment until the scrofula had resolved, with the patient being kept thyroid-stimulating hormone suppressed. We plan to reassess the mediastinal lymphadenopathy with a further chest CT scan on completion of anti-tuberculous therapy.

Severe hypercalcaemia and high parathyroid hormone level with palpable neck lump

W Y Yang, P Kirkland

From the Conquest Hospital, East Sussex, UK.

Introduction

Parathyroid carcinoma is a rare disease which can cause primary or tertiary hyperparathyroidism. The histological diagnosis can be difficult.

Case report

A 63-year-old woman was referred with a calcium concentration of 3.7 mmol/l and a parathyroid hormone level of >4000 ng/l. She had a large right thyroid mass. A diagnosis of primary hyperparathyroidism with a large thyroid nodule was made. The patient underwent a total thyroidectomy and bilateral superior parathyroidectomy. Although ultrasound-guided fine needle aspiration cytology (FNAC) had been requested, aspiration was not performed.

Radiology

Both ultrasound and magnetic resonance imaging of the neck revealed a large, nodular thyroid lesion with two enlarged parathyroid lesions on the right side. Sestamibi scanning showed that the majority of the uptake was in the right thyroid bed, with two foci of increased uptake in the upper and lower right parathyroid glands.

Histology

The $70 \times 40 \times 40$ mm parathyroid mass showed some nuclear pleomorphism and non-prominent mitotic activity. The capsule was adherent to the thyroid and there were fibrous septae within the lesion. Immunochemistry was positive for cytokeratin but negative for TTF1,

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calcitonin and synaptophysin. There was no vascular invasion.

Discussion

Dr Sanderson agreed that the histological distinction between parathyroid carcinoma and adenoma was extremely difficult.

Conclusion and lessons learned

Diagnosis of parathyroid carcinoma can be very difficult, and a combination of clinical and histological findings is needed. The consensus of opinion was that FNAC should be performed prior to surgery, as ultrasound-guided FNAC is now readily available.

A case of advanced parotid malignancy presenting with paraneoplastic syndrome

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Introduction

Acinic cell carcinoma is a relatively uncommon malignancy, accounting for 1 to 6 per cent of all salivary gland tumours. Paraneoplastic syndrome is also rare in head and neck cancers. We present a case of an enormous, neglected, acinic cell parotid cancer with associated haematological paraneoplastic syndrome.

Case report

A 38-year-old, emaciated woman presented with bleeding from a 14×12 cm, left-sided, fungating parotid tumour. She also had psychotic symptoms, intractable femoral and contralateral internal jugular venous thrombosis, heparin-induced thrombocytopenia, severe hypoalbuminaemia, and septicaemia. A haematological diagnosis was made of a paraneoplastic hypercoagulable state. She was admitted to the intensive care unit with consultant haematological input, and a multidisciplinary decision was made to proceed to surgery despite her extremely poor condition. Surprisingly, all her co-morbidities resolved after surgery.

Radiological findings

Computed tomography scanning of the head and neck showed an extensive left parotid mass and contralateral venous thrombosis involving the right internal jugular vein and extending up to the right transverse sinus.

Histological findings

Histological analysis revealed acinic cell carcinoma with a mixture of solid, papillocystic and follicular patterns.

Management

The patient received anticoagulation and an inferior vena cava filter for her venous thrombosis. She underwent excision of the left parotid tumour and a left, type II, modified radical neck dissection. A latissimus dorsi muscle flap was used to reconstruct the facial defect.

Conclusions and lessons learned

In selected cases, radical surgical excision of an advanced malignancy can reverse paraneoplastic syndrome and an intractable hypercoagulable state, where medical treatment is unsuccessful.

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