Unusual presentation of more common disease/injury

Hyperglobus, do not forget the sinister

Aitor de Gea Rico,¹ Sat Parmar,² Peter J Revington¹¹Department of Oral and Maxillofacial Surgery, Frenchay Hospital, Bristol, Avon, UK²Department of Oral and Maxillofacial Surgery, Queen Elizabeth Hospital, Birmingham, UKCorrespondence to Aitor de Gea Rico, odontoaitor@hotmail.com**Summary**

Hyperglobus is an elevation of the ocular globe with the majority of the orbit remaining intact. We present a case of hyperglobus caused by a metastatic mass from a prostate carcinoma. There are no other reported cases in the literature.

BACKGROUND

Metastatic malignancies affecting the oral and maxillofacial (OMF) region are rare and comprise only 1% of all malignancies of the jaw. They occur more frequently in the jaw bones than in the oral soft tissues. The mandible is more frequently involved, mostly in the molar region, followed by the premolar region and rarely the condyle.¹ Different cancers have different potentiality to develop OMF metastases.² The primary site of the tumour differs among genders. Lung, kidney and prostate gland tumours are the most common for men, and breast, genital organs and kidneys for women. Advanced prostate cancer is frequently accompanied by development of metastases to bone and it has been regarded as unique in its ability to induce osteoblastic reactions in the skeleton.³

Hyperglobus is a rare presenting sign of metastatic prostate cancer. Clinicians should be aware of such a potential presentation in order to include metastatic disease in their differential diagnoses and instigate prompt specialist referral for appropriate management. This case report also emphasises the need for systematic general, regional and local examination and the importance of eliciting subtle signs.

CASE PRESENTATION

A 63-year-old man was referred to hospital by his general practitioner with a 7-day history of increasing diarrhoea, abdominal pain and double incontinence.

His medical history revealed diagnosis of prostate adenocarcinoma in 2003 for which he underwent radical prostatectomy. In 2008, on further follow-up, he was diagnosed of skeletal metastases following a prostate specific antigen (PSA) elevation of 400 and consequent bone scan. Regular medications included Leuprorelin three monthly injections (hormonal therapy). He was a heavy drinker (70 units/week) and a smoker of 50 pack-years.

On clinical examination he was cachectic. Cardiovascular and respiratory examinations were normal. Abdominal examination revealed hepatomegaly with a tender and irregular liver edge. Rectal examination demonstrated normal sphincter tone and smooth rectal walls.

The differential diagnosis included incidental infection, diclofenac induced or overflow diarrhoea, and poorly controlled pain. He was admitted to the hospital for further investigations.

After 44 days, the patient complained of a sudden facial swelling on his left cheek bone accompanied by a 'sniffly nose'. Facial bone x-rays were arranged and a referral to the OMF surgery team was made.

Clinical examination of the face and scalp revealed facial asymmetry, with hyperglobus and exophthalmos of the left eye. A 4 cm×3 cm circular mass of bony consistency and smooth borders was found in the left zygomatic region (figures 1 and 2). Further examination revealed full range of

Figure 1 Clinical photograph showing hyperglobus of the left eye associated with left zygomatic expansion.

Figure 2 Clinical photograph showing exophthalmos of the left eye associated with left zygomatic expansion.

eye movements with no diplopia, normal visual acuity and pupils equal and reactive to light. Other cranial nerves were normal. There was no cervical lymphadenopathy.

INVESTIGATIONS

The occipito-mental views showed increased density over the left zygoma and maxilla. Facial bone CT (figure 3) was performed to better identify the limits of the lesion. It demonstrated an abnormal left zygoma with an associated soft tissue mass extending into the left maxillary antrum and infratemporal fossa. The zygoma was expanded with a mixture of sclerotic and lytic elements. The appearances were consistent with metastatic disease.

OUTCOME AND FOLLOW-UP

Given the evidence of skeletal metastases and the radiographic appearance, the diagnosis was established based on clinical findings. This was managed conservatively and palliative treatment was initiated. The patient was discharged to a nursing home and died within 1 month.

DISCUSSION

Metastatic prostate cancer involving the OMF region is well documented. It is usually described affecting the mandible with associated mental neuropathy and/or pathological fracture.^{3–5} Unusual locations such as the orbit⁶ and the zygomatic complex⁷ have also been

Figure 3 Facial bones CT scan. Coronal view displaying left orbital floor disruption and left maxillary antrum invasion.

reported. To our knowledge, there are no other reported cases in the literature of metastatic masses associated with hyperglobus as a presenting sign.

Prostate cancer bone metastases have typically been characterised as being osteoblastic. However, emerging evidence suggests that its development requires osteoclastic activity in addition. It remains to be defined how prostate cancer cells synchronise this combination.⁸ According to this, our patient's CT scan revealed a lesion with a mixture of sclerotic and lytic elements which helped in establishing our presumed diagnosis.

The number of metastases is an important factor in the treatment of malignant tumours with OMF metastases. Surgical excision could be considered in selected cases. However, OMF metastases are usually evidence of widespread disease and poor prognosis. Nevertheless, early diagnosis can lead to useful palliation and quality-of-life improvement. Our conservative management aimed to minimise the morbidity associated with surgery.

Given the medical history, clinical features and imaging, the reported lesion is consistent with a prostate cancer metastatic deposit. In patients with known history of prostate cancer, clinicians should regard head and neck lesions with a high index of suspicion of malignancy.

Learning points

- ▶ Hyperglobus is an elevation of the ocular globe with the majority of the orbit remaining intact and it could be a presenting sign of metastatic disease from prostate cancer.
- ▶ Systematic general, regional and local examination is crucial to elicit subtle signs indicative of new or progressive disease.
- ▶ In patients with known history of prostate cancer, clinicians should regard head and neck lesions with a high index of suspicion of malignancy.

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Gomes AC**, Neto PJ, de Oliveira e Silva ED, *et al.* Metastatic adenocarcinoma involving several bones of the body and the cranio-maxillofacial region: a case report. *J Can Dent Assoc* 2009;**75**:211–14.
2. **Shen ML**, Kang J, Wen YL, *et al.* Metastatic tumors to the oral and maxillofacial region: a retrospective study of 19 cases in est China and review of the chinese and english literature. *J Oral Maxillofac Surg* 2009;**67**:718–37.
3. **Halachmi S**, Madeb R, Madjar S, *et al.* Numb chin syndrome as the presenting symptom of metastatic prostate carcinoma. *Urol* 2000;**55**:296.
4. **Polligkeit J**, Westendorff C, Kröber SM, *et al.* Mental neuropathy and pathologic fracture of the mandible as initial symptoms of metastatic prostate carcinoma. *Mund Kiefer Gesichtschir* 2006;**10**:118–21.
5. **Viganò P**, Picozzi SC, Giuberti A, *et al.* Numb chin syndrome: the presenting symptom of a metastatic prostate carcinoma. *Arch Ital Urol Androl* 2007;**79**:155–7.
6. **Inagaki T**, Ebisuno S, Miyai M, *et al.* A case of prostatic cancer metastasizing to the orbit. *Int J Urol* 1999;**6**:114–15.
7. **Harlan JW**, Petty PM, Bostwick DG. Prostate cancer masquerading as a zygomatic posttraumatic mass. *Mayo Clin Proc* 1997;**72**:248–50.
8. **Keller ET**, Brown J. Prostate cancer bone metastases promote both osteolytic and osteoblastic activity. *J Cell Biochem* 2004;**91**: 718–29.

This pdf has been created automatically from the final edited text and images.

Copyright 2012 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.

BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Please cite this article as follows (you will need to access the article online to obtain the date of publication).

de Gea Rico A, Parmar S, Revington PJ. Hyperglobus, do not forget the sinister. *BMJ Case Reports* 2012;10.1136/bcr-2012-006634, Published XXX

Become a Fellow of BMJ Case Reports today and you can:

- Submit as many cases as you like
- Enjoy fast sympathetic peer review and rapid publication of accepted articles
- Access all the published articles
- Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow