shows the bone mineral density at each site. Except in the trochanteric area, bone mineral density was significantly greater in the group treated with oestrogen.

Comment

Our results show that oestrogen prevents bone loss at three of the four skeletal sites at which bone mineral density was measured. The risk of fractures of the femoral neck and vertebral bodies has been attributed to differing pathogenetic influences.⁵ Nevertheless, the importance of preservation of bone mass in reducing the incidence of fractures cannot be overemphasised.

We found that bone mass was preserved not only in cancellous bone but also in compact bone, although the effect in cancellous bone was much more pronounced. Thus adequate oestrogen replacement therapy in postmenopausal women should result in the incidence of fractures among women falling to that among men.

- 1 Aitken JM, Hart DM, Lindsay R. Oestrogen replacement therapy for prevention of osteoporosis after oophorectomy. *Br Med J* 1973;iii:515-8.
- 2 Lindsay R, Hart DM, Aitken JM, MacDonald EB, Anderson JB, Clarke A. Long term prevention of postmenopausal osteoporosis by oestrogen. *Lancet* 1976;ii:1038-41.
- 3 Riggs BL, Wahner WH, Dunn WL, Mazess RB, Offord KP, Melton LJ III. Differential changes in bone mineral density of the appendicular skeleton with ageing: relationship to spinal osteoporosis. *J Clin Invest* 1981;67:328-35.
- 4 Lindsay R, Hart DM, Forrest C, Baird C. Prevention of spinal osteoporosis in oophorectomised women. *Lancet* 1980;iii:1151-4.
- 5 Lindsay R, Anderson JB. Radiologic determination of changes in bone mineral content. *Radiography* 1978;44:21-6.

(Accepted 28 January 1987)

Department of Obstetrics and Gynaecology, Stobhill Hospital, Glasgow

F AL-AZZAWI, MRCOG, research fellow

D M HART, MD, FRCOG, consultant gynaecologist

Regional Bone Center, Helen Hayes Hospital, New York

R LINDSAY, PHD, FRCP, professor of medicine

Correspondence to: Mr F Al-Azzawi, Department of Obstetrics and Gynaecology, University of Cambridge, Rosie Maternity Hospital, Cambridge.

Complications of nose piercing

Both ear and nose piercing for decorative purposes are widely practised, the latter being particularly popular among Asian women. Though subcutaneous stud retention after ear piercing has been described,^{1,2} to the best of our knowledge this is the first report of similar complications from nose piercing.

Case histories

Case 1—A 20 year old Asian woman presented to the casualty department one week after having had her nose pierced and a decorative stud retained by a butterfly clasp inserted. Her nose had become increasingly painful, and the stud had apparently disappeared. External examination of the nose showed a firm, tender nodule covered by a dark crust (figure (a)), and internal examination showed the butterfly clasp partly buried in granulation tissue within the nostril

(figure (b)). The positions of the stud and clasp were demonstrated radiographically (figure (c)). Under local anaesthesia the stud and clasp were withdrawn through a small incision inside the nostril. One week later the nose had healed completely.

Case 2—A 12 year old Asian girl presented with a painful nose. Two months previously it had been pierced and a stud inserted. Externally the stud was visible but internally the butterfly clasp was concealed within a tender swelling on the lateral wall of the vestibule. This was confirmed radiographically. Under local anaesthesia an intranasal incision was made over the swelling, the clasp identified and removed from the stud, and the latter withdrawn separately. Healing was uneventful.

Case 3—A 17 year old Asian woman presented with a painful swelling on her nose, which had been pierced and a stud inserted three months earlier. The clinical features were the same as for the first case, and after removal of the stud the wound healed rapidly.

Case 4—A 70 year old Asian woman presented with left sided nasal obstruction, worse on inspiration. This side of the nose had been pierced 53 years previously, and she had worn a decorative stud for much of this time. The lateral wall of the left nostril was very thin and it collapsed on inspiration. Her alar collapse was treated satisfactorily with a Frances nasal dilator.

Comment

Poor standards of hygiene in the care of the puncture site have led to problems after ear piercing.³ Maintaining hygiene must be more difficult in the nose, particularly as so many people are nasal carriers of staphylococci. A stud placed through the lateral wall of the nose may penetrate the lateral nasal cartilages, with the possibility of inducing perichondritis and necrosis of the cartilage. This might explain the alar collapse seen in case 4.

Studs made from base metals have caused more problems in the ear than those made from gold or silver.³ Interestingly, all of our patients' studs were made of gold. The use of smaller butterfly clasps increases the risk of problems after ear piercing.⁴ Nevertheless, none of our patients had used small clasps.

Before the 1980s none of us had come across anyone other than Asian girls and women wearing nasal studs. Since the "punk rock" era, however, it is now fashionable for young women of any ethnic origin to undergo nasal piercing. One can observe this by visiting trendy wine bars and other places, even hospitals. Thus complications of nose piercing may be encountered more often in the future. In our experience simple removal of the retained stud has resulted in uneventful healing and antibiotic treatment has not been required.

1 Jay AL. Ear piercing problems. *Br Med J* 1977;ii:574-5.

2 Smith RB. Earring clasp as a foreign body in the ear lobe. *Plastic and Reconstructive Surgery* 1978;62:772.

3 Lazaro CDS, Jackson RH. Vanishing earrings. *Arch Dis Child* 1986;61:606-7.

4 Lawrence NW, Skinner JL. Butterfly in the ear. *Br Med J* 1983;286:1504.

(Accepted 13 February 1987)

Queen Elizabeth Hospital, Birmingham B15 2TH

M G WATSON, FRCS, registrar in otolaryngology

J B CAMPBELL, MMSC, FRCS, senior registrar in otolaryngology

Dudley Road Hospital and Sandwell Hospital, Birmingham B18

A L PAHOR, DLO, FRCS, consultant in otolaryngology

Correspondence to: Mr Watson.

The nose in case 1: (a) external; (b) internal; (c) plain x ray film.