Uncomfortable Finger Lesion

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A 56-year-old female is bothered by the appearance of an occasionally tender papule on her finger. It is growing very slowly, and doesn't bleed.

1. What is the most likely diagnosis?

a. Epidermoid cyst
b. Digital mucous cyst
c. Milia cyst
d. Verruca vulgaris
e. Cystic basal cell cancer

2. With what condition are these lesions associated?

a. Down syndrome
b. Neurofibromatosis
c. Osteoporosis
d. Rheumatoid arthritis
e. Tuberous sclerosis

3. How can this lesion be managed?

a. Reassurance of benign nature
b. Periodic drainage
c. Liquid nitrogen
d. Surgical excision
e. All of the above

Digital mucous cysts (DMCs) are benign, and often asymptomatic ganglion cysts of the digits, typically located at the distal interphalangeal (DIP) joints, or at the proximal nail fold. The etiology is uncertain, although it may relate to mucoid degeneration of connective tissue; this process seems to involve communication with the adjacent DIP joint and is often associated with osteoarthritis, and less commonly with antecedent trauma.

DMCs are translucent-to-flesh-coloured, solitary, semi-firm, round and dome-shaped papulonodules ranging from 1 to 10 mm. The cysts contain

a gelatinous fluid that is clear or yellow-tinged. They are located off the midline of the digits between the DIP and proximal nail fold, most frequently on the middle or index finger. Toes are less commonly involved.

Although lesions are usually asymptomatic, pain can occur if there is impingement on nerve fibers. Rarely, larger cysts can disfigure the affected digit, and nail deformities occur in many cases – the "nail groove" sign. Women and patients between 50 and 70-years-of-age are more commonly affected.

Standard therapies are surgery or pseudo-surgical options. One can needle the cyst with wide-bore needles, resulting in drainage and scarification, until the cyst resolves. Aspiration of cyst contents followed by intralesional triamcinolone acetonide (10mg/mL), or liquid nitrogen cryotherapy are commonly employed. Less commonly, curettage +/- electrodessication, CO_2 laser, or sclerotherapy can be tried.

More aggressive surgical procedures using cold-steel surgical excision have been used; these may require flaps or grafts. Another approach involves marsupialization, or excision of the whole proximal nail fold, with subsequent healing by secondary intention.