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Letters to Editor

New, small, needle holders: Their designs and usage techniques

Sir,

The purpose of this communication is to present a couple of tiny needle holders which, in the author's opinion, provide a definite advantage over the presently available needle holders. Repairs and reconstructions of delicate soft-tissue structures such as digital nerves, children's finger flaps, soft-tissue structures of the face, wounds on exposed body parts and umbilical and nipple–areolar complex translocations require precision, stability and control over suturing process to yield satisfactory results. Currently available needle holders are a bit too long to meet these requirements and result in cutting through of tissues, at least occasionally. A couple of small needle holders that were designed by the author (Venkata Ratnam Needle holder 1 and 2, patent pending) were found to help eliminate these shortcomings.

The new needle holders are 90 mm long and would fit in surgeons' palms, permitting the operating hand to rest on a stable surface in the surgical field [Figures 1 and 2]. It would be easy for the pulps of the thumb and index fingers to reach the wound edges, which enhances precision and control while taking 'bites' in the tissues [Figure 3]. The ring fingers of the suturing hands always stay in the rings of the instruments and thus, eliminate transmission of risky movements that can damage the tissues being sutured each time the ring fingers move in and out of the rings of the needle holders [Figures 4 and 5]. Incorporation of a pair of scissors in the needle holder design obviates the need for dependency on an assistant to cut the suture materials and thus enhances the control further. The teeth on one of the jaws of the scissors will catch and stabilise the suture material while cutting it which is a definite improvement in the design [Figure 6].

To summarise, these new needle holders were found to have the following advantages over the existing ones: (1) The wrist and hypothenar eminence of operating hand of the surgeon can rest on a stable surface throughout the procedure. Hence, the movement takes place in the small joints of wrist and index finger and thumb only. (2) The ring

Figure 1: Needle holders type 1 and 2. They are of 90 mm in length each

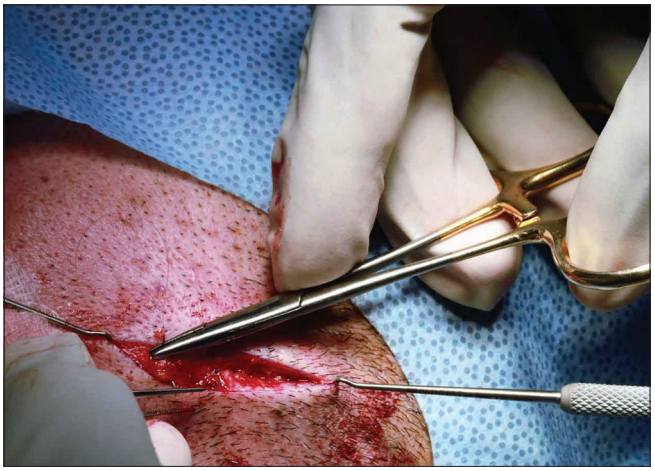

Figure 2: Note the support afforded by its small size, ring finger in the ring of the instrument and thumb in the other ring while catching the needle

Figure 3: Taking a bite. Note the support for the suturing hand, ring finger in the ring of the instrument and the index finger and thumb near the tip of the instrument and close to the tissues being sutured

Figure 4: Tying the knot. Note the support to the suturing hand in the sterile surgical field and the ring finger in the ring of the needle holder constantly, throughout the suturing process

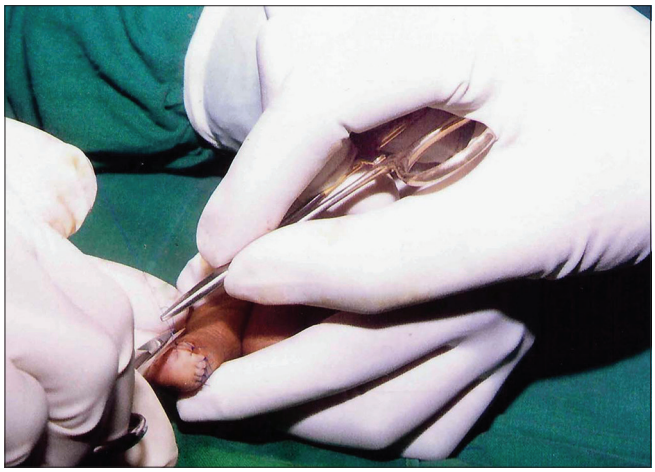

Figure 5: Cutting of suture while suturing with needle holder type 1. Note the support to the hand and wrist and consistent position of ring finger in the ring of the needle holder

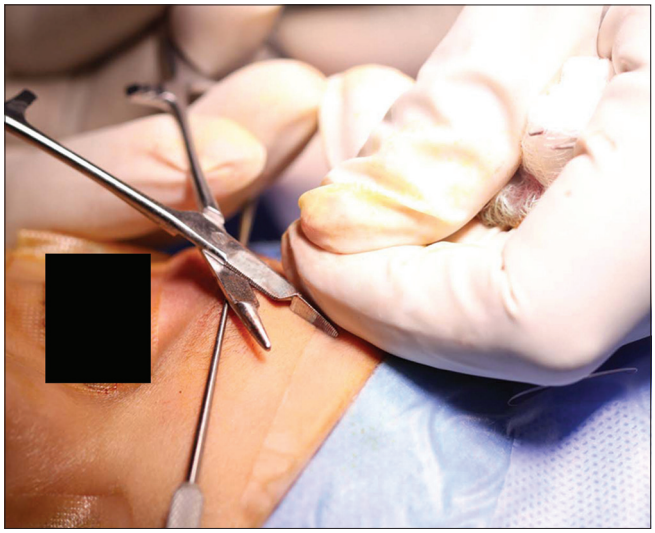

Figure 6: Cutting of the suture with the scissors incorporated in the needle holder type 2. Note the teeth in the upper blade of the scissors on careful examination

finger stays constantly in the ring of the needle holder. (3) Pulps of thumb and index fingers reach the target tissues. (4) The stability, precision and control provided are comparable to that a watch repairer gets while repairing watches.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

Bandikatla Venkata Ratnam

Department of Plastic Sugeon, Al Bustan Ahalia, Hospital, Abu Dhabi, UAE

Address for correspondence:
Dr. Bandikatla Venkata Ratnam,
Department of Plastic Sugeon, Al Bustan Ahalia, Hospital,
PB 2419, Moh'd Bin Zayed City, Abu Dhabi, UAE.
E-mail: bvratnam@emirates.net.ae

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