

Fixators to retractors: Use of k-wires and glove rings as self-retaining retractors

Sir,

Retraction is one of the most important facets in assisting a surgery. For this, there are numerous retractors in various sizes and shapes designed for retracting specific areas. They can be either handheld or self-retaining retractors.^[1] Dissections in depth may need multiple retractors at the same time. Multiple assisting hands can often be counterproductive. Many a times, a surgeon may not have the luxury of multiple assistants. Under these circumstances, self-retaining retractors can be a useful adjunct. Morrison's self-retaining retractors are the commonly used ones for this purpose. However, applying more than one such retractor in the same field may be cumbersome.

Fish hook retractors with rubber bands are very helpful, user-friendly and simple-to-use retractors that can address all the above concerns. These are not only used for effective retraction, but also can reduce the number of assistants required. Although we could find many of these in online stores, we were reluctant to buy them, as they were very expensive. Hence, we tried to replicate these with whatever we could find in our operation theatre. Fish hooks used in angling were modified for this purpose. However, whether these hooks are of medical grade is questionable.^[2]

One Kirschner wire (k-wire) with two sharp tips was cut into two in the middle. The sharp edge of each piece was bent and modified to form a hook [Figure 1]. A smaller loop was made with the other blunt end of the k-wire. So, now, we had two hooks with a curved sharp end that can cling on to the tissue to retract and the blunt loop that can hold the glove ring. The roll at the wrist end of a glove is best suited for this purpose. Rings can also be cut out from fingers of gloves to engage hooks made out of thinner

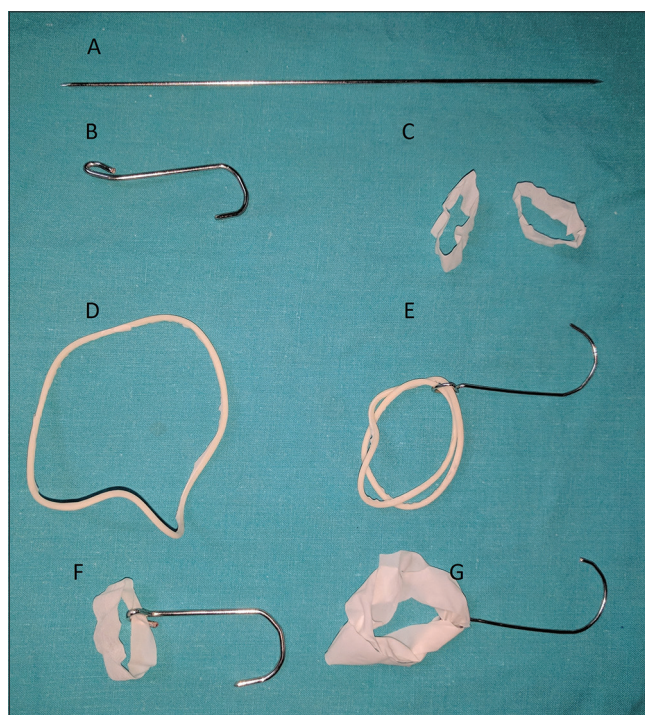


Figure 1: Stages of converting a K-wire to a self-retaining fishhook retractor. K-wire (A), one half of k-wire bent into a hook (B), rings cut from finger (C) and wrist (D) of a glove, retractors made out of k-wires of different sizes and glove rings (E-G)

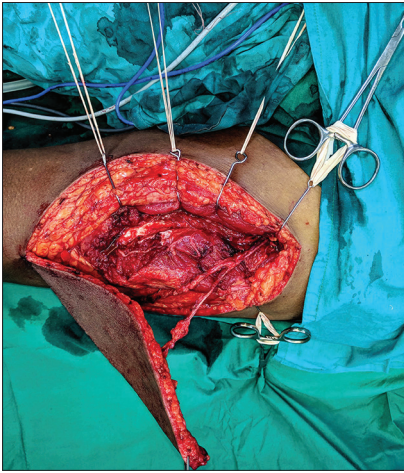


Figure 2: Intra-operative picture of the use of multiple self-retaining retractors made out of k-wires during pedicle dissection of an anterolateral thigh flap

k-wires. The glove ring is slid into this smaller loop and the loop is tightened. After fixing the hook to the tissue to be retracted, the glove ring can be fixed to the surgical drape in the retracted position with an Alley's forceps [Figure 2].

By using k-wires and rings made out of gloves, we are using medical-grade products. It also gives us the liberty to customise our k-wire-fish hook retractors. For retracting bulky structures such as muscles, a moderately bent thicker k-wire with a glove ring from the wrist end can be used, whereas for finer structures, a thinner wire with a small ring cut from glove finger should suffice.

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Conflicts of interest

There are no conflicts of interest.

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