Use of neodymium magnetic discs as pressure earrings for earlobe keloid postexcision

Ravi Shankar Jangra, MD,[a] Sanjeev Gupta, MD, DNB,[a]
Somesh Gupta, MD, DNB,[b] and Ronit Singla, MD[a]
Haryana and New Delhi, India

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SURGICAL CHALLENGE

Keloid, in general, is not amenable to excision due to unacceptably high recurrence rates.[1] Earlobe keloid is an exception, as the earlobe is amenable to compression therapy in the form of pressure earrings, which prevent recurrences.[2] However, pressure earrings are expensive, difficult to procure, and are not standardized. The conventional ferromagnets are heavy and provide a weak force, making them unsuitable for this purpose.

SOLUTION

We suggest the use of neodymium magnet discs as postexcision pressure earrings. We experimentally compared the force generated by ferromagnets with that by neodymium magnets across a 3.5-mm–thick high-density rubber sheet and found that a 15-mm diameter, 3-mm thick ferromagnet generated a 0.186-Newton force (equivalent to 7 mm of Hg pressure) and a 10-mm diameter, 1.75-mm–thick neodymium magnet generated a 0.82802-Newton force (79 mm of Hg). Thus, the neodymium magnet generated a pressure >10 times stronger than ferromagnets while weighing about half as much and measuring about half the size (Figs 1 and 2). The number of magnets required depends on the thickness of the earlobe. A thin earlobe generally needs only 1 small neodymium magnet on both earlobe sides. Ear studs can be fixed over the magnets using acrylic glue to improve aesthetics. The magnet should be applied up to 12 hours/day (as per tolerability of patient) for 6 months, starting from week 2 postoperation. Steroid injections are not necessary, and pressure alone might be effective in preventing recurrence. The neodymium magnets are available at online shopping sites, such as Amazon.com, at a nominal price.

From the Department of Dermatology and Venereolgy, Maharishi Markandeshwar Institute of Medical Sciences and Research, Haryana[a]; and All India Institute of Medical Sciences, New Delhi.[b]
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Correspondence to: Sanjeev Gupta, MD, DNB, #B2, Maharishi Markandeshwar Institute of Medical Sciences and Research, Medical College Residential Campus, Mullana, Ambala, India. E-mail: sanjeevguptadr@gmail.com.
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Fig 1. Neodymium magnet discs generate a strong force and can stick across thick tissue surfaces.

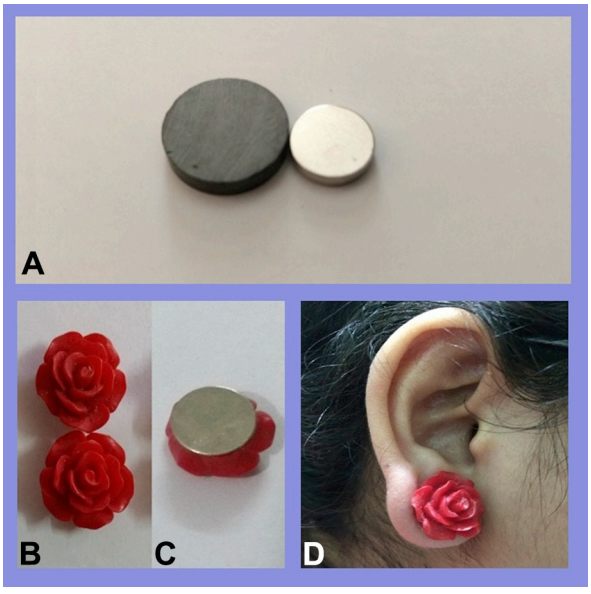

Fig 2. **A**, A conventional ferromagnet (*left*) is larger, heavier, and weaker than the neodymium magnet (*right*). **B**, Ear studs. **C**, Ear stud fixed on neodymium magnet using acrylic glue. **D**, Neodymium magnet with ear stud is aesthetically pleasing and generates sufficient pressure.

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