increases iron absorption. 2. Hypoxia was found to increase iron absorption by approximately one-third.

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A Simple Method of Cutting Split Thickness Skin Grafts from Small Animals. (22799)

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The great increase in interest in homografting and especially in that of skin homografting prompts us to report what we have found to be a simple and reliable method of obtaining split thickness grafts from the rabbit and rat. Full thickness, pinch, and split thickness grafts all have their advocates and peculiar advantages. The split thickness graft, however, has been especially useful in our work for several reasons. 1) It has a high initial take (we have not yet had a failure). 2) Its hairlessness, softness and thinness make viability easy to evaluate, and also make it ideal for use in millipore chamber technics. 3) It requires no dressing of any kind.

Methods heretofore mentioned in the literature are either too cumbersome or require expensive equipment such as the Brown Electro dermatome. We have found the following method to be simple, rapid, and dependable. The equipment required is inexpensive and can be used by relatively inexperienced persons.

Method. In essence the skin to be used is stretched tightly over a flat block by means of a special clamp and a graft is cut freehanded.

In detail: 1) Donors are clipped closely and widely over the donor site and the remaining stubble is epilated with Barium Sulphide and corn starch paste. The donors are then kept for 1-3 days at which time a fine stubble of new hair growth will indicate the anlagen phase of the skin or hair growth cycle. 2) Under barbiturate anesthesia an incision is made at one end of the donor area and the skin and panniculus carnosa is elevated from the underlying fascia by blunt dissection. 3) The specially shaped block (Fig. 1) is introduced into the space thus formed and the clamp is applied so as to hold the skin stretched tightly over the block. 4) At this point it is advantageous to make any desired identifying marks by pricking the skin with a #24 needle dipped in India ink (Fig. 2). 5) The graft can now be cut easily with a straight razor held freehand. The clamp serves as a handle to steady the skin. Grafts of as much as 60 sq cm can be cut in a single sheet from a 300 g rat (Fig. 2). 6) The clamp is removed, the block withdrawn and the incision closed with Michel clips or may be sutured as desired. 7) The grafts may be applied to the recipient bed by any method. We have found Michel clips to be a very rapid and entirely satisfactory way of securing the graft (Fig. 3). 8) By placing the

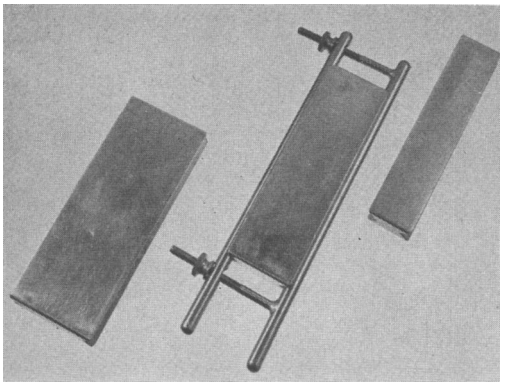

FIG. 1. Stainless steel clamp and three Duraluminum blocks of different widths which it will fit.

grafts on the dorsum of the recipients and isolating the animals for the first 48 hours we have not found it necessary to use any type of protective or pressure dressing.

In 25 rats autografted with 4 x 10 cm grafts the only slough which occurred was in the small points of pressure from the clips. Otherwise, all grafts could be considered 100% takes. Infection or hematoma formation under the grafts has not occurred at any time even in animals severely debilitated by toxic medications. No attempt at sterile technic has been made.

Summary. The details of a new method of cutting split thickness skin grafts from small animals are reported with a discussion of some of the advantages.

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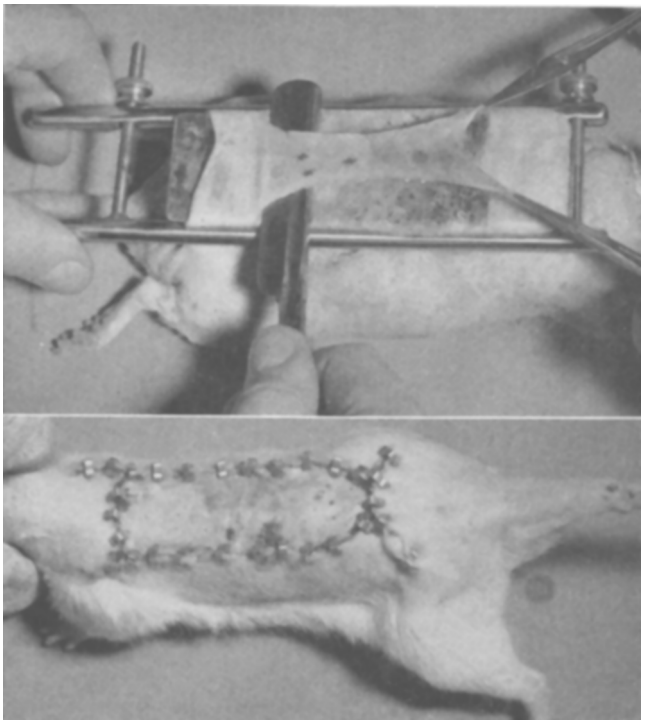

FIG. 2 (top). Clamp in place and graft being cut. Notice identifying tattoos.
FIG. 3 (bottom). Homograft on 6th postoperative day. No dressing was used. The granulating area represents a button hole in the graft. The dark mottling in the center of the graft was reddish-purple at the time of the photograph, and was the first area of slough.