ABSTRACT
A cervical collar enclosed in a normally closed tubular cover that encases the collar along its length while leaving the ends of the collar exposed so that the collar ends can be attached to each other. The cover is formed of a one-way stretch material that is stretchable transversely of the length of the cover and the collar.

10 Claims, 6 Drawing Figures
COVER FOR CERVICAL COLLARS

BACKGROUND OF THE INVENTION

For certain types of injuries, it is standard medical practice for a patient to wear a cervical collar about his neck. These collars, since they are exposed to the air, become dirty from the air and also from the patient’s perspiration and have to be washed fairly frequently, thus requiring the patient to have spare collars to be worn when the other collars are being washed. In addition, the collars tend to be unsightly and thus are unattractive to the patient.

These problems may be alleviated by covering the cervical collar with a removable cover that can, when removed from the collar, be laundered separately from the collar with a spare cover covering the collar while the original cover is being laundered. The cover may be formed of a decorative material which is more attractive than the outside surface of the collar.

While covered cervical collars are known (as exemplified by U.S. Pat. Nos. 2,389,690, 3,189,026, and 3,512,523), a cervical collar cover that is easily applicable and removable from the collar and will snugly fit a range of sizes of collars so as to not adversely affect its therapeutic functions without making the patient uncomfortable has not heretofore been developed. It has been found in medical practice that patients who need to wear cervical collars will not wear an unsightly collar during social functions. Hence, they leave the collars off, adversely affecting their treatment. It has also been found that both men and women will wear the cervical collar continuously as directed when various appropriate materials are used as covers that will blend with their social dress, thus aiding in their recovery. The current practice hinders recovery.

SUMMARY OF THE INVENTION

The removable cover of this invention is formed of a tube of one-way stretch material that is stretchable in a direction transverse to the length of the cover. The cover encases a cervical collar, whose width varies along its length, while leaving the ends of the collar exposed so that they may be attached to each other. The one-way stretch material enables the cover to snugly mold or form itself to the collar without adversely affecting its therapeutic functions. Since the cover is not stretchable lengthwise of the collar, it will not bunch up about the ends of the collar so as to interfere with the attachment of the collar ends when the collar is mounted about the patient’s neck and so as to make the patient uncomfortable by reason of bunched up collar ends.

With this invention, the collar life may be prolonged by washing the collar covers instead of the collars and the collar may be made more decorative, and thus more acceptable to the patient, by making the cover of a suitable decorative material.

The use of cervical collar covers also enhances the comfort of the patient and increases the utility of the general device by increasing the air flow, thus reducing the heat about the patient’s neck and also reducing the abrasion of the patient’s chin, his skin, his bone and muscular structure of the base of the neck, and by serving as a perspiration absorbent, all of which add to the patient’s comfort, thus increasing the usability of the therapeutic device.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an elevation of the cervical collar;
FIG. 2 is a plan of the cervical collar taken on the line 2—2 of FIG. 1;
FIG. 3 is a view of the cervical collar as it is applied about a patient’s neck;
FIG. 4 is an elevation of the cover;
FIG. 5 is a section taken on the line 5—5 of FIG. 4; and
FIG. 6 is an elevation of the cover encasing the collar.

DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. 1 and 2 show a conventional cervical collar that is formed of a flexible and resilient pad 10 having a flexible tab 12 projecting from one of its ends 13. A patch 14 of Velcro adhesive material or any other adhesive or holding type closure material is stitched to the outer side 16 of the collar 8 adjacent its other end 17 and is intended to adhere to a cooperative strip of material 18 on the inner side of the tab 12 when the collar 8 is mounted on and encircles the patient’s neck, as indicated in FIG. 3. The top side 20 and the bottom side 22 of the collar 8 are curved so that the width of the collar varies along its length, this width being less at the ends of the collar than in the remainder of the collar. The midportion of the top side 20 of the collar has a concavity 26 formed therein that is adapted to receive the patient’s chin when the collar is worn. The midportion of the bottom side 22 has a convex portion 28 that is opposite the concavity 26 in order to correctly fit the supportive, normal, bodily structures utilized to carry the weight of the head.

FIGS. 4 and 5 show the cover 30 of this invention which is intended to cover the cervical collar. The cover 30 is made of a ply 31 one-way stretch material that can stretch transversely of its length (vertically in FIG. 4), but cannot stretch lengthwise (horizontally in FIG. 4). While any one-way stretch material can be utilized, polyester, dacron or nylon materials have been found to be preferable because of their smoothness and cooling quality. Cooperative elements 32 and 34 of a separable fastener are attached to the top and bottom of the cover 30. The material of the cover is folded over at one of its ends 36 to form a ply 38 of the cover material that extends inwardly of the cover side 36. A dart 40 is formed in the end 36 of the material and a dart 42 is formed in the other end 44 of the material, the darts 40 and 42, respectively, serving to lessen the widths of the cover ends 36 and 44.

In placing the cover 30 on the cervical collar, the cover is laid out flat as indicated in FIG. 4 and the collar is placed on the cover as indicated in phantom in FIG. 4. The collar end 17 and the patch 14 are placed on the two plies 31, 38 of the cover material adjacent the cover end 36 and the collar tab 12 is placed adjacent the cover end 44. The cover 30 and the collar 8 are so dimensioned that they are of approximately equal lengths. The cover 30 is then folded about the collar, as indicated in FIG. 6, with the separable fastener elements 32, 34 located alongside the collar bottom 22 and the separable fastener is closed to thereby cause the cover to form a tube that encases the collar while leaving the collar ends exposed. The ability of the cover material to stretch transversely, but not longitu-
inally, enables the cover to mold or form itself to the curved top 20 and the bottom 22 of the collar without stretching lengthwise of the collar so that the collar can continue to perform its function with the cover on without the ends of the cover bunching up about the collar ends so as to interfere with the function of the collar or add discomfort to the patient. The narrowing of the collar ends by the darts 40, 42 also serves to enable the cover to cover the relatively narrow ends of the collar without interfering with the collar function.

The cover-collar combination is now encircled about the patient's neck as shown in FIG. 3 with the collar drawn in phantom, similarly to the way the collar is encircled about the patient's neck without the cover, and the tab 12 is pulled out of the exposed cover end 44 and is inserted into the exposed cover end 36 where the material strip 18 on the tab 12 is secured to the patch 14.

By utilizing a single ply of material that is stretchable only transversely of the collar, the cover serves to protect the collar from dirt and to render the collar more decorative without lessening the therapeutic effectiveness or comfort to the patient of the collar. In order to enhance the decorative nature of the cover, its outer surface may be made of a suitable decorative material.

It has been found in medical practice that patients who need to wear cervical collars will not wear an unsightly collar during social functions, hence they leave collars off, adversely affecting their treatment. It has been found that both men and women will wear the cervical collar continuously as directed when various appropriate materials are used as covers that will blend with their social dress, thus aiding in their recovery.

While most of the cover is made of one ply 31 of material so that it will not render the collar unduly stiff and interfere with its function, the ply 38 cooperates with the ply 31 to form two plies of material that are located in the portion of the cover that bears against the patch 14. The material of the patch 14 has the characteristic of wearing out any material that bears against it. By making the portion of the cover that bears against the patch 14 of two plies, and thus thicker than the remainder of the cover, the resistance of the portion of the cover bearing against the patch when worn out is increased.

As stated above, the ends 36, 44 of the cover 30 have darts 40, 42 formed therein to make them narrower than the remainder of the cover to thus accommodate the relatively narrow ends of the collar 8. The darts provide a smooth closure at the back of the neck, where the cover ends 36, 44 are located on the patient and eliminate the need for hooks or snaps to render the cover ends narrower than the remainder of the cover. It has been found that hooks and snaps are difficult for patients with whiplash injuries or pinched nerves to handle.

When the cover is enclosed about the collar, the separable fastener formed by the separable fastener elements 32, 34 extend along the bottom of the collar where it will not irritate the chin or neck of the patient or any other part of the body that the patient chooses to place the separable fastener.

I claim:

1. In a cervical collar having a pair of opposed ends, the improvement comprising a removable cover for a cervical collar, adapted to enclose the cervical collar whose top and bottom are curved, and whose width varies along its length with the ends of the cervical collar being smaller in width than the remainder of the collar, comprising: a tube of flexible material having a pair of opposed ends, width reduction means formed in each end of said tube effective to render the width of the cover ends smaller than the width of the remainder of the cover, said tube being open at its ends and adapted to enclose the collar length-wise of the collar while leaving the ends of the collar exposed and free to be attached to each other, said flexible material being so constructed that it is only stretchable in a direction that is transverse to its length and thus transverse to the length of the collar.

2. A collar-cover combination as set forth in claim 1 wherein said width reduction means comprises at least one dart formed in each of said tube.

3. The cover of claim 1 adapted for use with a cervical collar having a patch of adherent material at one end that is adherable to a tab at its other end in order to mount the collar about a patient's neck wherein an end portion of the cover that is adapted to encase the patch is thicker than the remainder of the cover.

4. The cover of claim 3 wherein said thicker end portion of the cover is formed of a fold of the cover material that extends inwardly of said end of the cover so that said thicker portion of the cover is made of two plies of the material.

5. The cover of claim 1 further comprising: a separable fastener extending lengthwise of a desired portion of the cover.

6. In combination with a cervical collar whose top and bottom are curved and whose width varies along its length, said collar having a pair of opposed ends, said ends being smaller in width than the remainder of the collar, a removable cover comprising: a tube of flexible material encasing the collar lengthwise of the collar while leaving the ends of the collar exposed and free to be attached to each other, said flexible material being so constructed that it is only stretchable in a direction that is transverse to the length of the collar, and width reduction means formed in each end of said tube effective to render the width of the tube ends smaller than the width of the remainder of the tube.

7. The collar-cover combination of claim 6 further comprising: a separable fastener extending lengthwise of a desired portion of the cover.

8. The collar-cover combination of claim 6 wherein the collar has a patch of adherent material at one end and a tab at its other end, said tab being adherable to said patch in order to mount the collar about a patient's neck; and wherein the end portion of the cover that encases the patch is thicker than the remainder of the cover.

9. The collar-cover combination of claim 8 wherein said thicker end portion of the cover is formed of a fold of the cover material that extends inwardly of said end of the cover so that said thicker portion of the cover is made of two plies of the material.

10. A cover as set forth in claim 9 wherein said width reduction means comprises at least one dart formed in each end of said tube.