The present invention describes a garment for use by post-operative patients. In one aspect of the garment, the invention provides a mechanism for securing post-operative drainage systems used to collect fluids generated in the body as a result of surgery. Another embodiment of the invention comprises a garment used for breast cancer patients who have undergone a single or double mastectomy.
GARMENT FOR USAGE BY POST-OPERATIVE PATIENTS

FIELD OF THE INVENTION

[0001] This invention relates to a line of upper body apparel specifically designed to accommodate patients with various drainage tubes and drain collection devices.

BACKGROUND OF THE INVENTION

[0002] The use of surgical drainage tubes and drain collection devices continues to be a common facet of the postoperative management of surgical patients. These drainage tubes and drain collection devices are used for a variety of abdominal surgeries, myocutaneous flap surgery, and breast surgeries. Their primary function is to collect accumulated fluids produced after surgical procedures. The drainage tubes are inserted near the operative site through separate openings made in the skin and are typically secured with sutures. The drainage tube is then attached to a collection reservoir, which exerts negative pressure to collect the fluids from the surgical wound.

[0003] The length of time that these drainage systems are left in place can vary from weeks to even months. Additionally, with the increasingly shorter lengths of stay in the acute-care setting, more often than not, patients are discharged home with the responsibility of caring for and managing these drainage tubes and drain collection devices. The combination of these two factors has created a demand for a line of apparel that not only allows for proper storage of these drain collection systems but also is capable of concealing these devices in an aesthetically appealing style.

SUMMARY OF THE INVENTION

[0004] The design of the present invention secures and conceals drainage collection systems and accommodates the patient with post-operative restrictions on range of motion by virtue of its unique "step-into" feature. An embodiment of the present invention described herein includes a garment with an interior detachable pocket and loop. The detachable pocket and loop facilitate storage and stabilization of the drain collection system, which in turn minimizes movement, thereby potentially minimizing patient discomfort. Patient discomfort is potentially reduced by these features because the loop secures the tubing, which reduces the potential for dislodging the drainage system. The location of the pocket feature of the invention, combined with the loose fitting design of the top, allows the patient ease of access for readily emptying the drain collection device(s). In an alternate embodiment, the detachable pocket is adjustable along a seam within the garment. Yet another embodiment provides for adjustment of the loop along an inside seam within the garment.

[0005] The invention further comprises a garment for use by mastectomy patients. This embodiment can include a detachable pocket, and optionally a detachable loop. In addition, it includes a detachable bra-like garment with attachment points located along the shoulder seams.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 shows a front elevational view of a garment.

[0007] FIG. 2 is a sectional view taken along the line 2-2 of FIG. 1.

[0008] FIG. 3 is a sectional view taken along the line 3-3 of FIG. 1.

[0009] FIG. 4 shows a front elevational view of a garment with an attachable bra-like garment.

DETAILED DESCRIPTION OF THE INVENTION

[0010] The invention described herein is not limited in its application to the details of construction and the arrangement of the components set forth in the following description or illustrations in the accompanying figures. The invention is capable of other embodiments and of being practiced or carried out in various ways. The phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting. The use of "including" and "comprising" and variations thereof is meant to encompass the items listed thereafter and equivalents thereof as well as additional items. The use of "consisting of" and variations thereof herein is meant to encompass only the items listed thereafter. The use of letters to identify steps of a method or process is simply for identification and is not meant to indicate that the steps should be performed in a particular order. Moreover, the use of gender specific pronouns is not meant to exclude either gender from the benefits provided by the present invention.

[0011] Turning to the present invention, humans often wear articles of clothing (also known as apparel, dress, garments, or attire) for functional and/or social reasons. Clothing protects the body; it also delivers social messages to other humans. Function includes protection of the body against strong sunlight, extreme heat or cold, and precipitation, protection against insects—in sum, against anything that might injure an unprotected human body. Humans have shown extreme inventiveness in devising clothing solutions to practical problems.

[0012] One type of common apparel is the T-shirt. A T-shirt can be a shirt with short sleeves, a round neck, put on over the head, without exterior pockets. It was originally used as an undershirt. This is still done, but it is also often worn as the only clothing on the upper part of the body. The length varies, but it typically reaches the waist. One fashion is an "oversized" T-shirt. Often a text box and/or picture is printed on it: a slogan, something funny, details of an event. T-shirts can be sold colors or printed patterns.

[0013] The idea of the T-shirt came to the U.S. during WWI when U.S. soldiers noticed the light cotton undershirts European soldiers were using. Because T-shirts were comfortable and functional, they quickly became popular with Americans. In the 1960's people started to tie-dye and screen-print the basic T-shirt and its variants, the tank top, muscle shirt, scoop neck, and V-neck. A "scoop neck" shirt or T-shirt is one in which the scoop-shape neckline is dropped significantly below normal limits. Scoop-neck T-shirts are commonly worn by women, but have recently become fashionable for men as well. The term "T-shirt" also encompasses apparel with front openings, varying neck designs, and exterior pockets.

[0014] Turning to the inventive line of apparel, FIG. 1 shows a first embodiment of the present invention. More particularly, FIG. 1 shows an embodiment of a garment 10, which is designed for patients with a drainage tube and drain collection device. The garment 10 is a gathered scoop neck, tunic style, T-shirt, with short puffed sleeves finished with elastic banding at the arm openings. The neck opening of the garment of FIG. 1 is designed to allow patients to dress by stepping into their clothing if they choose. The unique step-into style of the shirt is designed for patients with medical restrictions placed on their range of motion. By way of
example, patients who have undergone breast surgery are instructed not to lift their arms above their shoulders for several weeks. This feature facilitates easy dressing for those who are medically restricted to limit the range of motion of their arms. In addition, in the embodiment shown in FIG. 1, the gathering at the yoke is designed to conceal drains, expanders and post-operative dressings associated with surgical procedures involving the upper torso or breast. In this embodiment, the optional bubble hem of FIG. 1 is further designed to conceal drains, expanders and post-operative dressings associated with abdominal surgeries. This embodiment is also designed to keep fabric away from sensitive incision areas.

Although the embodiment depicted in FIG. 1 has short puff sleeves finished with an elastic banding, it is readily understood by those skilled in the art that alternate embodiments with varying length sleeves could accommodate the inventive concepts discussed herein. Similarly, the inventive garment of FIG. 1 has a closed front. Those skilled in the art would recognize that the front could optionally be finished with buttons, a zipper, hook-and-eye closures, strings, and any number of mechanisms for achieving a different aesthetic look for the garment. Moreover, the length, the type of neck, and bottom stitching could vary without altering the inventive concepts.

The garment 10 could be made of any number of materials, but should be comfortable and soft on the skin because portions of the skin are likely to be sensitive after undergoing surgery. In one embodiment, the garment 10 could be made of a cotton/spandex blend. This embodiment would have the advantage of being soft on the skin, which is particularly important for contact points between the garment and the drain insertion site and post-operative scars. The breathability of a cotton/spandex embodiment of the garment 10 has the advantage of providing good ventilation. This aspect of the present invention could, for example, benefit post-mastectomy patients who experience early-onset menopause.

The present invention has the advantage of improving the healing process for patients. The loops 14 and pockets 16 shown in FIG. 1 serve to stabilize the drainage tube(s) and drain collection device(s), which in turn stabilizes the drain that is inserted subcutaneously. The removable and adjustable pockets 16 and loops 14 are designed to store and conceal various drainage systems. In an embodiment of the invention, the detachable pockets 16 and loops 14 snap into place on an interior inside seam and the patient can adjust the placement of the pocket 16 up or down along the row of snaps to accommodate the patient’s body shape and preference. The application of the inside pocket 16 and loop 14 is designed to promote drain function, allow quick, easy access for emptying and provide the patient with the peace of mind to know that the drain will not accidently get dislodged.

The loops 14 are designed to secure the drainage tube, preventing movement and tension on the drain’s insertion site, thereby minimizing pain and discomfort, and preventing accidental dislodgement. Stabilization of the drain reduces the potential for irritation and infection of the surrounding skin. In addition, a secure drainage tube and drain collection device prevents movement and tension on the drainage site, thereby minimizing pain and discomfort. The loops 14 and pockets 16 depicted in FIG. 1 have the advantage of being detachable. The detachability aspect of the loops 14 and pockets 16 serves two purposes, one functional and one psychological. If the loops 14 were not detachable, they only way to feed the tubing through a loop would be to do it when the drain collection device was not attached to the drainage tube. This could lead to leakage and also may result in unnecessary movement of the portion of the drainage tube located at the insertion site. With respect to the detachability of the pockets 16, it is common for drain collection devices to leak small amounts of fluid. Having detachable pockets 16 enables the wearer of the garment 10 to remove the pockets 16 for cleaning without having to wash the whole garment 10.

From a psychological perspective, some patients may need to undergo additional treatment after having their drainage tubes and drain collection devices removed. These patients, while not completely done with their medical treatment, may nonetheless find it empowering to be able to remove portions of their clothing related to the phase of their treatment that required them to wear drainage tubes and drain collection devices. One such example could be breast cancer patients undergoing a single or double mastectomy. In an early phase of their treatment, following the single or double mastectomy, they may be discharged with a one or more drainage tubes and one or more drain collection devices. In a later phase of this patient’s treatment, she may return to the hospital to have breast reconstruction surgery. From a psychological perspective, the garment 10 of the present invention could be the piece of apparel within her wardrobe that she associates with healing and surviving.

In an alternate embodiment, the loops 14 and pockets 16 of FIG. 1 could be adjustable. In this embodiment, the adjustability feature facilitates the ability to raise and lower the position of the loops 14 or pockets 16 so as to create optimum negative pressure and ensure that the drain collection device(s) remains below the tubing insertion point. In addition, adjustability enhances comfort.

Focusing on the loops 14 of FIG. 1, these loops may be made of fabric. In addition, they could have an attachment mechanism 18 that would enable them to be attached to the seam of the garment 10. The attachment mechanism 18 could be snaps, VELCRO, a zipper, a hook-and-eye configuration, or similar attachment mechanisms well known in the art. FIG. 2 shows, by way of example, how snaps could be used in the present invention to provide the adjustability feature discussed above. Generally speaking, adjustability can be created by providing a longer anchored attachment portion 24 that is required by the loop attachment portion 26, irrespective of the choice of attachment mechanism 18.

In alternate embodiments, there could be a single loop 14, a plurality of loops 14, or no loop 14 at all. Moreover, loops 14 could be placed in locations other than at a side-seam in order to better accommodate drainage tubing.

As was the case with the loops 14, the pockets 16 of the embodiment of FIG. 1 could also be made of fabric. The pockets 16 contain an opening for placement of a drainage collection device. They may optionally contain an interior lining used to better secure the drain collection device or to provide fluid absorption in the event of leakage. The pockets 16 could have an attachment mechanism 18 that would enable them to be attached to the seam of the garment 10. The attachment mechanism 18 could be snaps, VELCRO, a zipper, a hook-and-eye configuration, or similar attachment mechanisms well known in the art.

FIG. 3 shows, by way of example, how snaps could be used in the present invention to provide the adjustability feature discussed above. Although four snaps are shown in FIG. 3, alternate embodiments could use as few as two snaps.
Generally speaking, adjustability can be created by providing a longer anchored attachment portion 34 than is required by the pocket attachment portion 36, irrespective of the choice of attachment mechanism 18.

[0025] The embodiment of FIG. 1 shows two detachable pockets 16. In alternate embodiments, there could be a single detachable pocket 16 or more than two detachable pockets 16.

[0026] FIG. 4 shows an alternate embodiment of the present invention designed for mastectomy patients. For this patient, the psychological impact of clothing choices and public appearance are enhanced because she will be leaving the hospital without one or both breasts. For some mastectomy patients, the desire to appear to the outside world as a woman having both breasts intact may be strong. As a result, a breast cancer patient may choose to use prosthetic devices that would enable her to achieve her accustomed look and shape. Moreover, for women who have had a single or double mastectomy, some may choose to undergo breast reconstructive surgery, which in many instances does not occur until several months after the mastectomy. In some ways, the garment 40 can become a psychological tool in the healing process for mastectomy patients because its functional aspects facilitate healing from the point of breast removal through the breast reconstruction phase.

[0027] Turning to FIG. 4, in addition to a loop 14, and pocket 16, as described generally above, the embodiment of FIG. 4 also includes an attachment mechanism 41 for securing a bra-like garment 42 to the shoulder seams 43 of the garment 10, 40 embodiments discussed above. The bra-like garment 42 does not have traditional bra straps. Rather, the shoulder straps are wider than a traditional bra strap. The bra-like garment 42 can optionally have two or three snaps in one embodiment to attach the straps to the shoulder seams 43 of the garment 40. The advantage of this embodiments is that it is more comfortable for those patients who are not yet able to wear a traditional bra. The detachable bra-like garment 42 provides support until the patient is able to wear a traditional bra. Once the patient has reached that stage of recovery, she can detach the bra-like garment and still have a comfortable top to wear. In terms of the attachment mechanism 41, in this embodiment it could be comprised of snaps, VELCRO, a zipper, hook-and-eye fasteners and the like. The bra-like garment 42 includes a pocket 44 for the insertion of a prosthetic device. The pocket 44 is proximal to the side-seam of the bra-like garment 42, thereby facilitating the insertion of the prosthetic device. In an alternate embodiment, the pocket 44 could be located distal to the side-seam of the bra-like garment 42. In yet another alternate embodiment, the bra-like garment 42 of FIG. 4 could have two pockets 44 for insertion of two prosthetic devices. Positioning of these pockets could be proximal or distal from the side-seam as described above.

[0028] The previous description of the disclosed embodiments is provided to enable any person skilled in the art to make or use the present invention. Various modifications to these embodiments will be readily apparent to those skilled in the art, and the generic principles defined herein may be applied to other embodiments without departing from the spirit or scope of the invention. Thus, the present invention is not intended to be limited to the embodiments shown herein, but is to be accorded the widest scope consistent with the principles and novel features herein disclosed.

We claim:
1. A garment for use by an individual who has an externally placed drainage system comprising:
   a detachable pocket for housing a drain collection device; and
   attachment means for securing the detachable pocket to a seam of a garment.
2. The garment of claim 1 further comprising:
   a plurality of pockets; and
   attachment means for securing the plurality of pockets to a seam of a garment.
3. The garment of claim 1 wherein the attachment means can be adjustably secured to the seam of the garment.
4. The garment of claim 2 wherein the plurality of attachment means can be adjustably secured to a plurality of seams of garment.
5. The garment of claim 1 further comprising:
   a detachable loop; and
   attachment means for securing the detachable loop to a seam of a garment.
6. The garment of claim 1 further comprising:
   a plurality of detachable loops; and
   attachment means for securing the plurality of loops to a seam of a garment.
7. The garment of claim 5 wherein the attachment means can be adjustably secured to the seam of the garment.
8. The garment of claim 6 wherein the plurality of detachable loops can be adjustably secured to the seam of the garment.
9. A garment for use by an individual who has a surgically placed drainage system comprising:
   a detachable pocket for housing a drain collection device; and
   a snapping mechanism for securing the detachable pocket to a seam of a garment.
10. The garment of claim 9 further comprising:
    a detachable loop; and
    a snapping mechanism for securing the detachable loop to a seam of a garment.
11. The garment of claim 1 further comprising:
    attachment means for securing a bra-like garment wherein the bra-like garment includes a pocket for inserting a prosthetic device.
12. The garment of claim 1 further comprising:
    a snapping mechanism for securing a bra-like garment wherein the bra-like garment includes a pocket for inserting a prosthetic device.
13. The garment of claim 11 further comprising attachment means for securing a detachable loop to a seam of the garment.
14. The garment of claim 12 further comprising a snapping mechanism for securing a detachable loop to a seam of the garment.

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