

Knowledge, attitudes, and practices regarding wound care among general population in Aseer region

Muneer Jan¹, Khalid Hussein Almutairi², Maha Abdullah Aldugman²,
Rawan Naif Althomali², Fahad Mohammed Almujary²,
Norah Abdullah Abu Mughaedh², Lama Nasser Alhadi²

¹Assistant Professor, Department of Surgery, College of Medicine, ²Medical Student, College of Medicine, King Khalid University, Abha, Saudi Arabia

ABSTRACT

Background: Wound care is observed to be one of the major challenge in health-care system. Wound infection is one of the major issues in medical treatment. There is limited information regarding knowledge and attitude of patients regarding care of traumatic wound. This study was conducted to assess the knowledge, attitudes, and practices regarding wound care among general population in Aseer Region, Saudi Arabia. **Materials and Method:** This cross-sectional study was a questionnaire-based study conducted on general population from time period from September 2020 to November 2020. The demographic data collected were age, gender distribution, marital status, residence, job profile, income, education, habit of smoking and any comorbidities. To analyze the knowledge, attitude and practice of general population regarding wound care, 28 well-constructed questions were framed and asked. The response to all these questions was recorded and subjected to statistical analysis. **Results:** A total of 897 participants were included in the study. In total, 56.74% subjects of age group 41–60 years of age. In around 80% participants, no co-morbidities were observed. Around 29% participants had previous experience of surgical wound, with most common wound site being abdomen. The most common symptom in around 58% participants was excessive bleeding. Use of Alcohol swab and dry gauze were commonly used by participants as wound care measures. **Conclusion:** We observed that knowledge, attitude and practices followed by patients were not up to the standard. As patients' knowledge, good attitude and practices are important in implementing newer management technique; thus, we advice to take necessary steps to improve the attitude and knowledge of general public.

Keywords: Aseer, attitude, general population, knowledge, practices, wound care

Introduction

Wound injury is a frequent event with the incidence of up to 50 million people reported worldwide till 2015.^[1] In emergency departments (ED), more than 6 million lacerations are treated each year in the United States.^[2] Most common cause of wound injury is road traffic accidents, systemic problems like Diabetes mellitus, etc. Inappropriate management of wound injuries can

affect health of individuals. Worldwide around 10% of mortality and 12% of morbidity has been reported with wound Injuries.^[3]

Wound care is observed to be one of the major challenge in health-care system. Wound infection is one of the major issues in medical treatment. There is limited information regarding knowledge and attitude of patients regarding care of traumatic wound. Nowadays, it is required that patients should know how to take care of wound injuries. Pieper B, *et al.*^[4] has observed that around 38.2% to 58.7% of patients returning from hospitals did not know how to take care of their wounds. If the wound is not properly taken care of at home, it can get infected (3% to 15%).^[5]

Address for correspondence: Dr. Muneer Jan,
Department of Surgery, College of Medicine, King Khalid
University, Abha, Saudi Arabia.
E-mail: muneerjan5@gmail.com

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Different etiological factors causing wound infection are poor general health, smoking, and corticosteroid. Various signs and symptoms of wound infection are swelling, pain, fever and purulent exudate.^[6] Patients with inadequate knowledge about wound care can lead to consequences like healthcare burden, financial impact and reduced quality of life. Social networking is playing an important role in increasing awareness among patients related to effect of various factors on wound healing. Very limited studies are available in the literature, regarding assessment of knowledge and attitude of patients about caring wound injuries.^[4,7,8]

Thus, this study was conducted to assess the knowledge, attitudes, and practices regarding wound care among general population in Aseer Region, Saudi Arabia.

Materials and Method

This cross-sectional study was a questionnaire-based study conducted from time period from September 2020 to November 2020. The self-administered structured questionnaire was used to assess the demographic variables, information regarding factors affecting wound healing and wound care. Validity of questionnaire was assessed and was observed to be appropriate ($\alpha = 0.84$). The study was conducted in accordance with the Declaration of Helsinki and was approved by the local ethics committee of the institute (ECM#2020-1210). Informed written consent was obtained from all patients prior to their enrollment in this study. The demographic data collected was age, gender distribution, marital status, residence, job profile, income, education, habit of smoking and any comorbidities.

To analyze the knowledge, attitude and practice of general population regarding wound care, 28 well-constructed questions were framed and asked. The response to all these questions was recorded. General characteristics like type, site, source, signs and symptoms of wound care, were recorded by asking questions with different options. Various factors affecting wound care were analysed by asking questions with three options of “agree”, “disagree” and “don’t know”.

The data obtained was subjected to statistical analysis using IBM SPSS version 20.0 software. Descriptive statistics i.e. mean, standard deviation, frequencies and percentages were computed.

Results

Demographic data was recorded in terms of age, gender distribution, marital status, residence, job profile, income, education, habit of smoking and any co-morbidities [Table 1]. A total of 897 participants were included in the study. 56.74% subjects of age group 41-60 years of age. 92.084% subjects were of Aseer region. Maximum number of participants 39.353% were civil servants and 51.17% subjects were with bachelor's degree. 52.95% participants were earning around 5000-10000 sr. Habit of smoking was observed in only 6.9% participants and

88.0713% were non-smoker. In around 80% participants, no co-morbidities were observed. The most common was diabetes mellitus, followed by hypertension, asthma, arthritis etc.

Table 2 shows the responses to 28 questions asked to access the knowledge, attitude and practices followed by general population for wound care. Around 29% participants had previous experience of surgical wound, with most common wound site being abdomen. Most of the participants, got immediate wound care after getting injured. The most common symptom in around 58% participants was excessive bleeding. Most of the

Table 1: Demographic characteristics

Parameters	Options	No. of subjects	Percentage
GENDER (n=897)	Male	388	43.26
	Female	509	56.74
MARITAL STATUS	Married	628	70.01115
	Divorced	17	1.895206
	Widow	9	1.003344
AGE GROUP	Single	243	27.0903
	18-25	199	22.18506
	26-40	292	32.55295
Residence	41-60	361	40.24526
	More than 60	45	5.016722
	Aseer	826	92.08473
Occupation	Other	71	7.915273
	House wife	1	0.111483
	Civil servant	353	39.3534
	Health sector	42	4.682274
	Housewife	11	1.22631
	Military sector	53	5.908584
	Non-working	96	10.70234
	Private sector	59	6.57748
	Retired	80	8.918618
	Student	180	20.06689
Education	Teacher	17	1.895206
	Retired teacher	5	0.557414
	Bachelor's degree	459	51.17057
	Diploma	86	9.587514
	Master's degree	37	4.124861
	Phd	20	2.229654
	Secondary school or les	123	13.71237
	University student	172	19.17503
Average monthly income	<5000	87	9.698997
	5000-10000 sr	475	52.95429
	>15000 SR	335	37.34671
Smoking	Ex-smoker	45	5.016722
	No	790	88.07135
	Yes	62	6.911929
Any comorbidity	Arthritis	34	3.790412
	Asthma	38	4.236343
	Autoimmune	2	0.222965
	Cardiac conditions	6	0.668896
	Diabetes mellitus	85	9.476031
	Epilepsy	1	0.111483
	Hypertension	65	7.246377
	Hypothyroid	1	0.111483
	No	719	80.15608

Table 2: Response to questions

Parameters	Options	No. of subjects	Percentage	
If you have previous experience with wound care, what is the type of the wound?	Accident	57	6.354515	
	Cut	252	28.09365	
	Episiotomy	86	9.587514	
	Diabetic wound	8	0.891862	
	No thing	257	28.65106	
	Surgical wound	262	29.20847	
	Ulcer	73	8.138239	
	Burn	3	0.334448	
Site of wound	Abdomen	143	15.94203	
	Thigh/leg	24	2.675585	
	Ass	1	0.111483	
	Back	9	1.003344	
	Bikini area	61	6.800446	
	Chest	11	1.22631	
	Face	71	7.915273	
	Neck	7	0.780379	
	Hand	37	4.124861	
	I didn't suffer from any wounds	229	25.52954	
	Time elapsed between the incidence of wound and receiving primary medical care:	After 1 week	25	2.787068
		I didn't suffer from any wounds	229	25.52954
		Immediately	486	54.1806
No response		38	4.236343	
Within 1-3 days		91	10.14493	
Within 4-7 days		14	1.560758	
Which of these signs or symptoms would you seek medical advice when you get injured?	Broad or deep wound	172	19.17503	
	Excessive bleeding	525	58.52843	
	Foreign body at the site of a wound	22	2.45262	
	Head injury	2	0.222965	
	If symptoms of infection occur	105	11.70569	
	If the cause of the wound was a bite or an injury from a dirty or rusty object, If symptoms of infection occur	24	2.675585	
	No	42	4.682274	
	Surgery	6	0.668896	
	Source of home wound care information	937-moh hotline.	49	5.462653
		Brochure	51	5.685619
Health awareness campaign		69	7.692308	
Healthcare workers		437	48.71795	
Internet		43	4.793757	
Media (newspaper, TV)		48	5.351171	
Relatives and friends		135	15.05017	
Social media (Headbook, whatsapp)		45	5.016722	
Good nutrition is necessary for wound healing	Agree	830	92.53066	
	Disagree	11	1.22631	
	I Don't know	56	6.243032	
Hands should be washed prior to changing wound dressing	Agree	878	97.88183	
	Disagree	10	1.114827	
	I Don't know	9	1.003344	
Wounds may prevent individuals from leaving the house	Agree	194	21.62765	
	Disagree	574	63.99108	
	I Don't know	129	14.38127	
Bad odor observed in infected wounds is caused by bacteria	Agree	713	79.48718	
	Disagree	19	2.118172	
	I Don't know	165	18.39465	
It is best to quickly pull the tape off the skin	Agree	160	17.83724	
	Disagree	563	62.76477	
	I Don't know	174	19.39799	

Contd...

Table 2: Contd...

Parameters	Options	No. of subjects	Percentage
Smoking may negatively affect wound healing	Agree	556	61.98439
	Disagree	78	8.695652
	I Don't know	263	29.31996
Antibiotics are essential for wound healing	Agree	584	65.10591
	Disagree	160	17.83724
	I Don't know	153	17.05686
Simple (superficial) wounds do not require treatment	Agree	329	36.67781
	Disagree	469	52.2854
	I Don't know	99	11.03679
Perfumes may worsen wounds	Agree	526	58.63991
	Disagree	155	17.27982
	I Don't know	216	24.08027
Wound care is best performed by someone else other than the wounded individual	Agree	515	57.4136
	Disagree	282	31.43813
	I Don't know	100	11.14827
Topical application of honey is beneficial for wound care	Agree	410	45.70792
	Disagree	202	22.51951
	I Don't know	285	31.77258
Taking shower may delay wound healing	Agree	372	41.47157
	Disagree	277	30.88071
	I Don't know	248	27.64771
Salted water has an anti-inflammatory effect	Agree	423	47.15719
	Disagree	156	17.3913
	I Don't know	318	35.45151
Exposure of wounds to fresh air aids in the healing process	Agree	551	61.42698
	Disagree	153	17.05686
	I Don't know	193	21.51616
Incense may delay wound healing	Agree	330	36.7893
	Disagree	245	27.31327
	I Don't know	322	35.89744
Topical application of home remedies such as mixed dough (Sabkha) has an anti-inflammatory effect	Agree	170	18.95206
	Disagree	345	38.46154
	I Don't know	382	42.5864
Vaseline is beneficial for reducing wound scars	Agree	263	29.31996
	Disagree	260	28.98551
	I Don't know	374	41.69454
Tetanus toxoid injection is necessary when you get injured?	Agree	411	45.8194
	Disagree	97	10.81382
	I Don't know	389	43.36678
Coffee beans are beneficial for bleeding control	Agree	218	24.30323
	Disagree	226	25.19509
	I Don't know	453	50.50167
Using Zamzam water to wash wounds may shorten the recovery time	Agree	170	18.95206
	Disagree	234	26.08696
	I Don't know	493	54.96098
If you get injured at home, what would you do first?	Apply antibiotics ointment , Go to the hospital	12	1.337793
	Clean the wound	96	10.70234
	Cover the wound, Go to the hospital	37	4.124861
	Go to the hospital	77	8.584169
	Stop the bleeding	675	75.25084
what is the Dressing used at home?	Cotton	45	5.016722
	Plaster	267	29.76589
	Dry gauze	588	65.55184
	Wet gauze	123	13.71237
	Towel	54	6.020067
Solutions used to clean wounds at home	Alcohol swab	391	43.58974

Contd...

Table 2: Contd...

Parameters	Options	No. of subjects	Percentage
	Almor (Traditional treatment)	7	0.780379
	Baby wipes	62	6.911929
	Betadine	270	30.10033
	Mercurochrome	137	15.27313
	Perfume	73	8.138239
	Tap water	472	52.61984
	Hydrogen peroxide	27	3.010033

participants got information about home wound care through health-care workers. Most of the participants agree with the fact that good nutrition and hand hygiene was essential for wound care. Many participants agree with the fact that smoking, perfume, honey, salted water, incense, tetanus toxoid and use of antibiotics can affect wound healing. Most of the participants did not believe in the use of Sabkha, Vaseline, coffee beans, and Zamzam water for wound healing. Use of Alcohol swab and dry gauze were commonly used by participants as wound care measures.

Discussion

A wound can be defined as disruption or damage to the normal anatomical structure thus interrupting physiological functions.^[9] Normal wound healing is a complex and dynamic process that involve a series of events, including bleeding, coagulation and initiation of an acute inflammatory response in relation to the initial injury. The inflammatory response initiates the process of regeneration, migration and proliferation of connective tissue and parenchyma cells, that in turn starts the synthesis of extracellular matrix proteins. Then, the deposition of collagen; and remodelling of new parenchymal and connective tissue starts.^[10]

Wound healing always remains a demanding clinical problem. An infected wound because of inadequate knowledge regarding wound care can increase damaging effects to patient and society. Disparity caused by infected wound can lead to reduction in functioning of individual, thus reducing his earning capacity. This directly and indirectly affects the overall health-care cost of country, thus affecting economy.

It has been observed that wound infection is common cause of morbidity and mortality among general population. Thus, an efficient management is required for proper healing of wound.^[10] It is essential that general public should have adequate knowledge and awareness with safe practices regarding wound care.^[11] Nowadays efforts have been made in educating general population about home wound care, so that consequences of wound infection can be avoided.

We observed very few research studies regarding assessment of attitude and knowledge of general population regarding wound care. Thus, this study was conducted to evaluate the knowledge, attitude, and practices of general population in relation to wound care.

In our study most of the participants were females. Similar finding was observed in a study by Agale SV in 2013,^[12] done in Iorland which showed that the proportion of the women were twice more likely to be affected than men. In our study surgical wound was most prevalent and site of wound was abdomen. The results were in contrast to study by Kumarasinghe SPW *et al.* 2004^[13] who found that diabetic wound was most common, with foot being the most common site.

It was observed that any treatment is successful if patient compliance is good. Coyer *et al.*^[14] in 2005 advocated that inadequate knowledge of patients regarding wound care can directly affect the success of treatment. Therefore it is highly important to assess the knowledge and attitude of patients regarding wound care so that we can take steps to improve their knowledge if it is lacking.^[14]

We observed that many patients in our study lack the adequate knowledge regarding factors affecting the wound care and how to manage them adequately. Thus we must take necessary steps to educate general population regarding wound care and what kind of practices they have to follow at home after surgical interventions.

Conclusion

Various types of wounds have been observed in general population in our study. The most common being surgical wound. We assessed knowledge and attitude of general public and practices they follow for wound care. In our study, knowledge, attitude and practices followed by patients were not up to the standard. As patients' knowledge, good attitude and practices are important in implementing newer management technique, thus we advice to take necessary steps to improve the attitude and knowledge of general public.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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