ORIGINAL ARTICLE

Microbial profiles and risk of amputation in fasciotomy and open wounds following the 2023 Türkiye earthquakes

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ABSTRACT

BACKGROUND: This retrospective, single-center study aimed to evaluate the microbial profiles of wound infections due to extremity injuries after the February 6, 2023 Kahramanmaraş earthquakes and their association with the risk of amputation.

METHODS: The study included 95 adult patients with post-earthquake wound infections and positive cultures—50 in the fasciotomy group and 45 in the open wound group.

RESULTS: The most frequently isolated microorganism was *Acinetobacter spp*. and the isolation rate of this pathogen was significantly higher in the fasciotomy group than in the open wound group (40% vs. 11.1%; p=0.0021). Although the *Escherichia coli* isolation rate was higher in the open wound group, this difference was not statistically significant. Polymicrobial infection rates were similar in both groups. Antibiotic susceptibility analysis showed that 86.5% of *Acinetobacter spp*. isolates were resistant to carbapenems and 10.8% to colistin. The isolation rate of *Acinetobacter spp*. was higher in patients who underwent amputation (35.14%) compared to those who did not (20.69%), but this difference did not reach statistical significance.

CONCLUSION: Our findings suggest that the pathogen profile in post-earthquake wound infections may vary according to wound type and that *Acinetobacter spp*. infections with high antibiotic resistance may be a potential risk factor for amputation. In conclusion, resource-based evaluation of post-disaster wound infections, planning early and targeted treatment strategies, and developing effective approaches against highly resistant pathogens are critical for reducing the risk of amputation.

Keywords: Earthquake; open wound; fasciotomy; infection; amputation.

INTRODUCTION

On February 6, 2023, two devastating earthquakes measuring 7.8 Mw and 7.5 Mw, respectively, struck the southern region of Türkiye within a nine-hour interval along distinct fault lines. These seismic events had catastrophic consequences, directly affecting eleven provinces—most notably Hatay (Antakya), Kahramanmaraş, Gaziantep (Nurdağı and Islahiye), Adıyaman (Gölbaşı), Malatya, and northern Syria—resulting in more than 53,000 fatalities, 108,068 injuries, and the displacement of over 1.2 million individuals.[1]

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Extremity injuries represent one of the most prevalent types of trauma necessitating surgical intervention in the aftermath of these mass-casualty earthquakes. Examples of such trauma include crush injuries sustained under debris, open fractures, and traumatic amputations.[2,3] Notably, crush injuries accompanied by extensive muscle damage are associated with markedly increased risks of morbidity and mortality.[4] Surgical procedures performed to manage these injuries—particularly fasciotomy and amputation—are known to predispose patients to postoperative wound infections.[5]

In the post-earthquake period, patients frequently experience disturbances in fluid-electrolyte balance and nutritional status, which not only prolong hospital stays but also increase susceptibility to nosocomial infections.[6] In the early phase following trauma, pathogens such as *Escherichia coli*, *Enterococcus faecalis*, and *Enterobacter* cloacae are commonly isolated. In contrast, in later stages, multidrug-resistant organisms—most notably *Acinetobacter baumannii*, *Pseudomonas aeruginosa*, and *Klebsiella pneumoniae*—are encountered with increasing frequency.[4,7-9]

Although infectious agents following earthquakes have been documented in the literature, definitive information regarding the precise sources of these infections remains limited. To develop optimal therapeutic strategies, it is essential to stratify patients according to the type of injury and to delineate whether the infection is associated with an open wound, a surgical site, or is nosocomial in origin.[2,10]

The primary objective of this study was to characterize wound infections that developed in the aftermath of the February 6, 2023 earthquakes, to identify the clinical contexts in which these infections arose, and to compare the pathogen profiles of open wounds and fasciotomy sites. The secondary objective was to evaluate the distribution of microorganisms isolated from cases resulting in amputation.

We hypothesized that the microbiological profiles of cultures obtained from earthquake-related open extremity wounds would differ from those obtained from postoperative fasciotomy wounds.

MATERIALS AND METHODS

This retrospective, single-center observational study included patients with extremity injuries sustained during the February 2023 earthquakes and treated at Ankara Etlik City Hospital. The study population comprised patients who developed wound infections following open injuries or fasciotomy procedures. Clinical data, including hospital records, microbiological culture results, surgical interventions, and patient outcomes, were systematically collected and analyzed.

Ethical approval for the study was obtained from the Ankara Etlik City Hospital Ethics Committee (Approval No: AEŞH-EK1-2023-08, August 9, 2023). All procedures were conducted in accordance with institutional research committee standards and the principles outlined in the Declaration of Helsinki.

A total of 95 adult patients with positive microbiological cultures obtained from open wounds or fasciotomy sites were included in the analysis. Data were reviewed by both an orthopedic and traumatology specialist and an infectious diseases specialist.

Sample Collection

Microbiological culture specimens were obtained using two distinct and complementary methods to ensure accurate identification of causative pathogens.

The first method involved intraoperative tissue biopsy collected during surgical debridement or revision. Tissue samples obtained in this manner are considered the gold standard for diagnosing deep infections or prosthesis-associated infections, as isolating organisms from infected tissue minimizes the risk of contamination from superficial flora.

The second method utilized the Levine swab culture technique, a semi-quantitative and standardized procedure commonly employed in wound microbiology. Using a sterile swab, the tip was rotated over a 1 cm^2 area of viable wound tissue for approximately five seconds. Sufficient pressure was applied to induce slight bleeding to access deeper tissue and reduce the likelihood of superficial colonization.

Before swab collection, the wound bed was carefully cleansed with sterile saline or water to remove necrotic tissue, exudate, and contaminants.

Patient Selection and Inclusion Criteria

Following the February 2023 earthquakes, a total of 7,317 patients were admitted to our hospital. This retrospective study included adult patients who underwent fasciotomy or presented with open wounds and exhibited clinical signs of infection. The diagnosis of wound infection or surgical site infection was based on the presence of clinical findings such as erythema, warmth, swelling, purulent discharge, delayed wound healing, new or increasing pain, or malodor. Wound cultures were obtained from these patients, and microbial growth was confirmed.

To establish two homogeneous study groups, specific patient subgroups were excluded from the analysis. A total of 1,931 patients were excluded for at least one of the following reasons: follow-up duration less than two years (n=225), insufficient data records (n=137), unspecified culture collection site (n=176), presence of both open wounds and fasciotomy sites (n=86), and absence of microbial growth in cultures (n=1,307). These exclusions were implemented to minimize potential confounding factors and ensure the reliability of microbiological and clinical comparisons between groups.

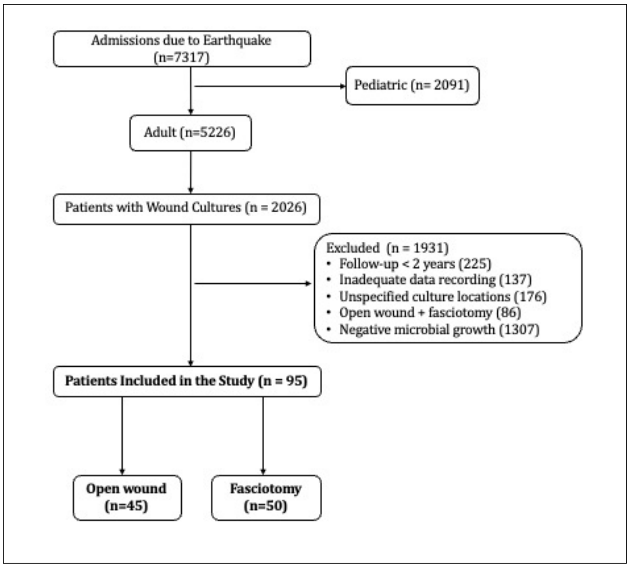

Figure 1. Patient flowchart.

As a result, 95 patients who met the inclusion criteria were included in the final analysis: 45 with open wounds and 50 with fasciotomy. This sample size was deemed sufficient to enhance the reliability of the study findings (Fig. 1).

Treatment Approach and Clinical Management

Empirical antibiotic therapy was initiated for patients with positive microbial growth in wound cultures, consisting of ceftriaxone (a third-generation cephalosporin) and metronidazole, as recommended by the infectious diseases department. Wounds that could be closed primarily were sutured after initial debridement. In cases of tissue loss or excessive tension, vacuum-assisted closure (VAC) therapy was utilized. When necessary, microvascular flap reconstruction or skin grafting was performed. Limb amputation was conducted in patients who demonstrated clinical deterioration.

Microbiological Analysis Procedure

Wound and intraoperative tissue cultures were obtained under sterile conditions and promptly transported to the laboratory. Specimens were inoculated onto blood agar and eosin methylene blue (EMB) agar plates and incubated at 37°C for 24–48 hours. Blood cultures were monitored for up to five days using the BD BACTEC™ FX system. Microorganism identification was performed using MALDI-TOF MS (Bruker Biotyper® Sirius) and the BD Phoenix™ M50 automated system. Antibiotic susceptibility testing was interpreted according to the 2023 guidelines of the European Committee on Antimicrobial Susceptibility Testing (EUCAST).

Statistical Analysis

The distribution of continuous variables was assessed with the Shapiro-Wilk test. Variables with a normal distribution are presented as mean±standard deviation (SD), whereas non-normally distributed variables are expressed as median [interquartile range, IQR]. Categorical variables are summarized as frequencies and percentages. For comparisons between groups, the Mann-Whitney U test was used for continuous variables, while Pearson's chi-square test or Fisher's exact test was applied for categorical variables, depending on sample size. A p-value <0.05 was considered statistically significant. All statistical analyses were performed using SPSS Statistics version 20.0.

RESULTS

The mean age of the 95 adult patients included in the study was 39.5±17.8 years (range: 18–97), and 44 (46.3%) were male (Table 1). Wound locations were distributed as follows: 23 (24.2%) in the upper extremity, 62 (65.3%) in the lower extremity (including 9 foot, 28 legs, and 25 thigh wounds), and 10 (10.5%) in the trunk (Table 2). There were no statistically significant differences in age or sex between patients who underwent fasciotomy (n=50) and those who did not (n=45) or between patients who underwent amputation (n=37) and those who did not (p>0.05).

Age is presented as mean±standard deviation (SD). Categorical variables such as sex, amputation status, and wound type are presented as frequencies and percentages. No statistically significant differences were observed in age or sex between patient groups (p>0.05).

Table 1. Demographic characteristics of the patients

Characteristic	Value	p-Value
Age (mean±SD)	39.5±17.8	>0.05
Sex		
Male	44 (46.3%)	>0.05
Female	51 (53.7%)	>0.05
Amputation	37 (38.9%)	0.143
Fasciotomy	50 (52.6%)	>0.05
Open Wound	45 (47.4%)	>0.05

Age is presented as mean±standard deviation (SD). Categorical variables such as sex, amputation status, and wound type are presented as frequencies and percentages. No statistically significant differences were observed in age or sex between patient groups (p>0.05).

Table 2. Distribution of wound localizations

Wound Localization	Number of Patients (%)
Upper Extremity	23 (24.2%)
Lower Extremity	62 (65.3%)
Thigh	25
Leg	28
Foot	9
Body	10 (10.5%)

Table 3. Distribution of isolated microorganisms by wound type, with total case numbers and percentages

Microorganism	Fasciotomy (n=50)		Open Wound (n=45)		Total (n=95)		p
	n	%	n	%	n	%	
Polymicrobial	16	32.00	14	31.10	30	31.58	1.000
Acinetobacter spp.	20	40.00	5	11.11	25	26.32	0.002
Escherichia coli	2	4.00	7	15.56	9	9.47	0.080
Pseudomonas spp.	6	12.00	2	4.44	8	8.42	0.273
Staphylococcus aureus	4	8.00	2	4.44	6	6.32	0.684
Klebsiella spp.	3	6.00	2	4.44	5	5.26	1.000
Enterobacter spp.	1	2.00	3	6.67	4	4.21	0.616
Enterococcus spp.	2	4.00	2	4.44	4	4.21	1.000
Streptococcus spp.	0	0.00	1	2.22	1	1.05	0.488
Proteus spp.	1	2.00	0	0.00	1	1.05	1.000
Bacillus spp.	0	0.00	1	2.22	1	1.05	0.488
Candida spp.	1	2.00	0	0.00	1	1.05	1.000

P-values were calculated using Fisher's exact test for all comparisons due to low cell counts.

Microbiological Findings

Polymicrobial infections were identified in 30 of 95 patients (31.6%). The most frequently isolated microorganisms were *Acinetobacter spp.* (n=25, 26.3%), *Escherichia coli* (n=9, 9.5%), Pseudomonas aeruginosa (n=8, 8.4%), *Staphylococcus aureus* (n=6, 6.3%), and *Klebsiella spp.* (n=5, 5.3%). Other isolates included *Enterobacter spp.* and *Enterococcus spp.* (each n=4, 4.2%), as well as *Streptococcus spp., Proteus spp., Bacillus spp., and Candida spp.* (each n=1, 1.1%).

Comparison of Fasciotomy and Open Wound Groups

Of the patients included in the study, 52.6% (n=50) were in the fasciotomy group and 47.4% (n=45) were in the open wound group. The rate of polymicrobial growth was 32.0% (16/50) in the fasciotomy group and 31.1% (14/45) in the open wound group, with no statistically significant difference between groups (p=1.000). When polymicrobial cultures were excluded from the analysis, a statistically significant difference was observed in the overall distribution of isolated microorganisms (overall p=0.048).

Acinetobacter spp. was the most frequently isolated microorganism, being significantly more prevalent in the fasciotomy group (40.0%; 20/50) than in the open wound group (11.1%; 5/45) (p=0.0021; statistically significant). Although *Escherichia coli* was more frequently isolated in the open wound group (15.6%; 7/45) than in the fasciotomy group (4.0%; 2/50), this difference did not reach statistical significance (p=0.0799). *Pseudomonas spp.* was isolated in 12.0% (6/50) of fasciotomy patients and 4.4% (2/45) of open wound patients (p=0.273). For other microorganisms, no statistically significant differences were observed between groups (all p>0.05).

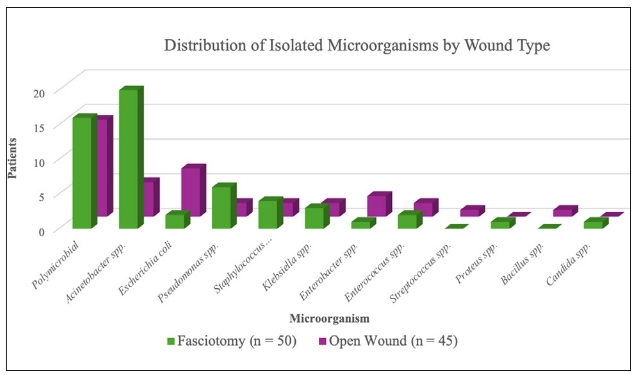

Figure 2. Comparative distribution of isolated microorganisms in fasciotomy and open wounds.

The distribution of all microorganisms isolated by wound type is presented in Table 3 and Figure 2.

Microbiological Findings in Patients With and Without Amputation

A total of 37 patients (38.95%) underwent limb amputation; of these, 21 (56.8%) were from the fasciotomy group and 16 (43.2%) from the open wound group. Polymicrobial infections were observed in 37.84% (14/37) of amputated patients and in 27.59% (16/58) of non-amputated patients (p=0.367). The most frequently isolated microorganisms in the amputated group were *Acinetobacter spp.* (n=13, 35.14%) and *Klebsiella spp.* (n=3, 8.11%). In the non-amputated group, the most common isolates were *Acinetobacter spp.* (n=12, 20.69%), *Escherichia coli* (n=7, 12.07%), *Pseudomonas spp.*

Table 4. Distribution of isolated microorganisms by amputation status

	Amputated (n=37, 38.95%)		Non-Amputated (n=58, 61.05%)		Total (n=95)		
Microorganism	**n**	**%**	**n**	**%**	**n**	**%**	**p**
Polymicrobial	14	37.84	16	27.59	30	31.58	0.367
Acinetobacter spp.	13	35.14	12	20.69	25	26.32	0.153
Escherichia coli	2	5.41	7	12.07	9	9.47	0.475
Pseudomonas spp.	2	5.41	6	10.34	8	8.42	0.477
Staphylococcus aureus	0	0.00	6	10.34	6	6.32	0.078
Klebsiella spp.	3	8.11	2	3.45	5	5.26	0.374
Enterobacter spp.	1	2.70	3	5.17	4	4.21	1.000
Enterococcus spp.	1	2.70	3	5.17	4	4.21	1.000
Streptococcus spp.	0	0.00	1	1.72	1	1.05	1.000
Proteus spp.	1	2.70	0	0.00	1	1.05	0.389
Bacillus spp.	0	0.00	1	1.72	1	1.05	1.000
Candida spp.	0	0.00	1	1.72	1	1.05	1.000

All p-values were calculated using Fisher's exact test.

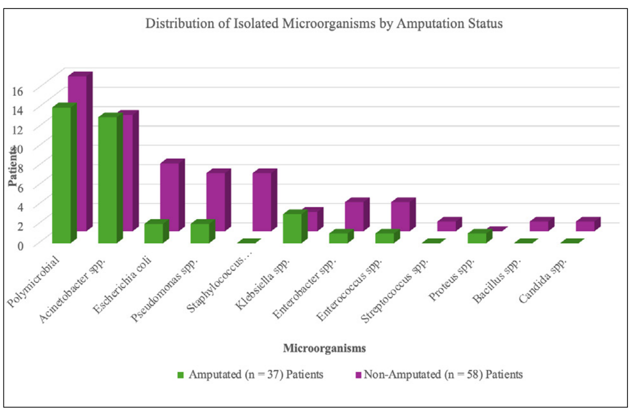

Figure 3. Relationship between isolated microorganisms and amputation status.

(n=6, 10.34%), and *Staphylococcus aureus* (n=6, 10.34%). No statistically significant differences were observed in the distribution of isolated microorganisms between amputated and non-amputated groups (all p>0.05).

The rate of *Acinetobacter spp.* isolation was higher in amputated patients, approaching statistical significance (35.14% vs. 20.69%; p=0.153). This finding suggests a possible association between Acinetobacter infection and an increased risk of amputation. Detailed distributions are presented in Table 4 and Figure 3.

Antimicrobial Resistance Patterns

Carbapenem resistance was identified in 86.5% (n=32) and colistin resistance in 10.8% (n=4) of *Acinetobacter spp.* isolates. Among the Pseudomonas aeruginosa strains, three were resistant to carbapenems and one was resistant to colistin. Of the eight *Klebsiella spp.* isolates, colistin resistance was detected in five.

DISCUSSION

This study demonstrated a statistically significant difference in the microbiological growth profiles of patients with open wounds compared to those who underwent fasciotomy. Across the entire cohort (including polymicrobial infections), the most frequently isolated microorganism was *Acinetobacter spp.*, which was identified in 40% of the fasciotomy group and 11% of the open wound group. Furthermore, the isolation rate of *Acinetobacter spp.* was 35.14% among amputated patients and 20.69% among those who did not undergo amputation. These findings suggest that *Acinetobacter spp.* infections may represent an important risk factor for the development of limb amputation.

Open wounds are frequently contaminated with foreign material during earthquakes, creating a conducive environment for infection development.[11] One of the major challenges in managing post-earthquake traumatic injuries is the risk of developing primary or secondary infections.[24] Such infections are associated with increased morbidity and mortality, prolonged hospital stays, and the need for additional surgical interventions.[10] In disaster surgery, there is consensus that all open wounds should be considered potentially infected.[3] According to the literature, the most commonly isolated pathogens in these wounds are *Streptococcus spp.*, *Staphylococcus spp.*, and *anaerobic bacteria*.[12] In contrast, in our study, *Aci-*

netobacter spp. and *Escherichia coli* were the most frequently isolated pathogens. This discrepancy may be attributed to the fact that, in our cohort, specimens were collected prior to antibiotic administration and before the initial debridement.

Fasciotomy is a limb- and life-saving intervention in emergencies such as compartment syndrome, and early application is recommended.[13,14] However, fasciotomy wounds represent a predisposing factor for the development of infection and sepsis.[3] Post-fasciotomy surgical site infections may lead to serious complications, including amputation.[15] In our study, *Acinetobacter spp*. was isolated in 40% of fasciotomy wound cultures, underscoring the infection risk associated with this procedure. Furthermore, the isolation rate of *Acinetobacter spp*. was 35.14% in amputated patients and 20.69% in non-amputated patients. These findings suggest that *Acinetobacter spp*. infections may be an important risk factor for the development of limb amputation.

In the study conducted by Özdemir et al.,[2] polymicrobial growth was identified in 64.7% of culture-positive cases; however, the type of wounds from which the cultures were obtained (fasciotomy versus open wound) was not specified. In our study, the rate of polymicrobial growth was 32.0% among fasciotomy cases and 31.1% among open wound cases. This proportional difference may be attributable to the exclusion, from our study, of patients who had cultures obtained from multiple anatomical sites simultaneously or who presented with both open wounds and fasciotomy sites.

In two separate studies conducted after the 1999 earthquakes, the rates of Gram-negative bacterial isolation were reported as 81.3% and 87.3%, respectively, with *Acinetobacter baumannii* identified as the most frequently isolated pathogen.[6,16] Subsequent studies have also confirmed the prominent role of *Acinetobacter* species in post-disaster infections.[4,8,17-20] Consistent with these findings, in our study, *Acinetobacter* species were the most frequently isolated microorganisms in both the fasciotomy group (40%) and the overall patient cohort (26.3%).

Eryılmaz-Eren et al. (2024)[25] reported the role of *Acinetobacter spp*. in hospital-acquired infections following the same disaster. In our study, *Acinetobacter spp*. was detected in 11.11% of open-wound cultures, suggesting that these isolates may originate not only from nosocomial sources but also from environmental and traumatic exposures.

Although Gram-negative bacteria are the principal pathogens in post-earthquake infections, resistant strains are particularly prominent in hospital-acquired infections.[8,18] Previous studies have demonstrated that resistant forms of *Acinetobacter baumannii* are frequently isolated following major disasters.[21] Kiani et al.[22] reported that 61.5% of Gram-negative bacteria isolated from wound infections were multidrug-resistant. Similarly, Wang et al.[9] found that approximately 65% of *Acinetobacter spp*. isolates obtained after earthquakes were resistant to carbapenems. Tao et al.[19] reported that 24.6% of their isolated *A. baumannii* strains were completely drug-resistant (pandrug-resistant). In our study, comparably high resistance rates were also observed. These high resistance rates complicate empirical antibiotic selection in the management of post-disaster wound infections and highlight the increasing need for broad-spectrum antimicrobial agents.

Early identification of infections, microbiological confirmation via culture, and the implementation of targeted, pathogen-specific treatment strategies are essential to improve therapeutic efficacy and patient outcomes.[10,18] However, in disaster settings, empirical therapy is often prioritized due to high patient volumes, with treatment subsequently adjusted according to culture results. In our study, *Acinetobacter spp*. was the most frequently isolated microorganism in the overall cohort. *Pseudomonas spp*. was more commonly isolated in the fasciotomy group (12.0%), whereas *Escherichia coli* was more frequently found in the open wound group (15.56%). Our findings, notably the considerable rates of Escherichia coli and polymicrobial infections in open wounds (in addition to *Acinetobacter spp*.), suggest that complex post-disaster wound infections may involve multiple pathogens, underscoring the need to consider broad-spectrum antibiotics in empirical therapy. Conversely, the isolation of pathogens such as *Pseudomonas spp*., *Staphylococcus aureus*, and *Klebsiella spp*. in the fasciotomy group further emphasizes the importance of culture-based and targeted treatment strategies in infection management.

According to the 2017 Centers for Disease Control and Prevention (CDC) guidelines, anti-staphylococcal β-lactam antibiotics and clindamycin are recommended for the treatment of post-traumatic wound infections, while the World Health Organization (WHO) recommends the use of penicillin G and metronidazole.[26,27] However, numerous investigators—notably Miskin et al.[8]—have emphasized that these recommendations may be insufficient to address the growing trend of antimicrobial resistance.[9,18,22,23] The addition of broad-spectrum antibiotics effective against resistant Gram-negative pathogens to empirical therapy in disaster settings may substantially improve clinical management.

These findings underscore the need to expand microbiological surveillance and implement rapid diagnostic and treatment algorithms in the management of post-disaster wound infections. Moreover, to reduce the risk of amputation, it is essential to integrate pathogen-specific guidelines and regional antibiotic resistance data into health policy.

This study has several limitations. Its retrospective design may introduce selection and reporting bias, thereby limiting the generalizability of the findings. The relatively small sample size may also constrain the statistical power of the analyses. Additionally, the single-center nature of the study restricts the extrapolation of results to other patient populations. Furthermore, potential confounding factors—such as inter-hospital transfers, empiric antibiotic therapy initiated prior to admission, and the timing of initial debridement—may have influenced the microbiological findings and clinical outcomes. Multicenter, prospective, randomized controlled studies involving larger patient cohorts are needed to validate these results.

CONCLUSION

This study demonstrates that the microbiological profile of wound infections may vary significantly according to the source of infection (open wound vs. fasciotomy) and highlights the necessity of individualized treatment strategies based on the specific characteristics of the infection. Moreover, *Acinetobacter spp*. infections were identified as a potentially important risk factor for limb amputation. Our findings emphasize the critical importance of early and appropriate pathogen-targeted treatment strategies in the management of post-earthquake wound infections.

Ethics Committee Approval: This study was approved by the Ankara Etlik City Hospital Clinical Research Ethics Committee (Date: 09.08.2023, Decision No: AEŞH-EK1-2023-08).

Peer-review: Externally peer-reviewed.

Authorship Contributions: Concept: H.G., B.Ç., A.D.; Design: A.D.; Supervision: H.G., B.Ç., S.K.; Resource: E.A., M.Y.A.; Materials: H.G., S.K., K.Ç.; Data collection and/or processing: H.G., M.Y.A.; Analysis and/or interpretation: B.Ç.; Literature review: H.M.; Writing: H.G., B.Ç., S.K., A.D.; Critical review: A.C.B., K.Ç.

Conflict of Interest: None declared.

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ORİJİNAL ÇALIŞMA - *ÖZ*

2023 Türkiye depremleri sonrası fasyotomi ve açık yaralarda mikrobiyal profiller ve ampütasyon riski

AMAÇ: Bu retrospektif tek merkezli çalışma, 6 Şubat 2023 Kahramanmaraş depremleri sonrası ekstremite yaralanmasına bağlı gelişen yara enfeksiyonlarının mikrobiyal profillerini ve bu enfeksiyonların ampütasyon riskiyle ilişkisini değerlendirmeyi amaçlamıştır.

GEREÇ VE YÖNTEM: Çalışmaya, deprem sonrası yara enfeksiyonu gelişen ve kültür pozitif olan 95 erişkin hastanın fasyotomi grubu: 50, açık yara grubu: 45 olmak üzere iki grup dahil edilmiştir.

BULGULAR: En sık izole edilen mikroorganizma Acinetobacter spp. olup, fasyotomi grubunda bu patojenin izolasyon oranı açık yara grubuna göre anlamlı olarak daha yüksek bulunmuştur (%40 vs. %11.1; p=0.0021). Açık yara grubunda ise *Escherichia coli* izole oranı daha yüksek olmasına rağmen, bu farklılık istatistiksel olarak anlamlı değildir. Her iki grupta polimikrobiyal enfeksiyon oranları benzer bulunmuştur. Antibiyotik duyarlılık analizlerinde, *Acinetobacter spp*. izolatlarının %86.5'inin karbapenemlere ve %10.8'inin kolistine dirençli olduğu gösterilmiştir. Ampütasyon yapılan hastalarda *Acinetobacter spp*. izolasyon oranı %35.14 ile ampütasyon yapılmayanlara (%20.69) göre daha yüksek bulunmuş, ancak bu farklılık istatistiksel anlamlılığa ulaşmamıştır.

SONUÇ: Bulgularımız, deprem sonrası yara enfeksiyonlarında patojen profilinin yara tipine göre değişiklik gösterebileceğini ve yüksek antibiyotik direncine sahip *Acinetobacter spp*. enfeksiyonlarının ampütasyon açısından potansiyel bir risk faktörü olabileceğini düşündürmektedir. Sonuç olarak, afet sonrası gelişen yara enfeksiyonlarının kaynak temelli değerlendirilmesi, erken ve hedefe yönelik tedavi stratejilerinin planlanması ve yüksek dirençli patojenlere karşı etkili yaklaşımların geliştirilmesi, ampütasyon riskinin azaltılması açısından kritik öneme sahiptir.

Anahtar sözcükler: Açık yara; ampütasyon; deprem; enfeksiyon; fasyotomi.

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