

Predictors of prolonged observation in pregnant trauma patients in the emergency department

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ABSTRACT

BACKGROUND: Trauma during pregnancy presents unique clinical challenges due to physiological adaptations and the need to ensure fetal well-being. Although guidelines recommend a minimum period of maternal and fetal monitoring following trauma, the factors associated with prolonged emergency department (ED) observation in pregnant trauma patients remain insufficiently defined. Identifying these factors may help optimize clinical decision-making and resource utilization in emergency care settings.

METHODS: This retrospective cohort study was conducted in a tertiary-care emergency department between January 2014 and January 2024. Patients were categorized according to ED observation duration as ≤ 6 hours or > 6 hours. Demographic characteristics and clinical variables, including Injury Severity Score (ISS), gestational age, RhD status, trauma characteristics, and consultation requirements, were recorded. Univariate and multivariable logistic regression analyses were performed to identify predictors of prolonged ED observation.

RESULTS: A total of 459 pregnant trauma patients were included in the analysis, of whom 238 (51.9%) were observed in the ED for more than 6 hours. Patients with prolonged observation had a significantly higher gestational age than those observed for ≤ 6 hours (median 24 weeks [interquartile range (IQR): 15–32] vs. 17 weeks [IQR: 11–23], $p < 0.001$). In multivariable analysis, higher ISS (odds ratio [OR]: 1.20, 95% confidence interval [CI]: 1.08–1.35, $p < 0.001$), advancing gestational age (OR: 1.07 per week, 95% CI: 1.04–1.09, $p < 0.001$), and RhD negativity (OR: 3.84, 95% CI: 1.33–11.14, $p = 0.013$) were independently associated with ED observation exceeding 6 hours. Although the number of consultations was significantly associated with prolonged observation in univariate analysis, it did not remain an independent predictor after multivariable adjustment.

CONCLUSION: Higher ISS, advancing gestational age, and RhD negativity were independently associated with emergency department observation lasting more than 6 hours among pregnant trauma patients.

Keywords: Emergency department; Injury Severity Score; observation duration; pregnancy; Rh alloimmunization; trauma.

INTRODUCTION

Traumatic events during pregnancy represent a significant cause of maternal mortality unrelated to obstetric complications, affecting approximately 6–8% of all pregnancies as a result of accidental or intentional injuries.^[1] Furthermore,

nearly 4% of pregnant individuals present to the emergency department (ED) for trauma-related reasons during gestation.^[2] Motor vehicle collisions, falls, and physical assaults constitute the most common mechanisms of injury in this population.^[3]

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The clinical management of pregnant trauma patients requires a distinct approach compared to non-pregnant individuals, primarily due to the profound physiological and anatomical changes associated with pregnancy.^[1,2] Focused Assessment with Sonography for Trauma (FAST) remains a widely used modality for the evaluation of intra-abdominal hemorrhage in trauma cases; however, studies conducted in general trauma populations have demonstrated that its sensitivity for detecting intra-abdominal injuries is limited.^[4] Moreover, trauma during pregnancy has been associated with an increased risk of adverse maternal and fetal outcomes.^[5] These considerations underscore the need for meticulous evaluation and vigilant monitoring of pregnant trauma patients in the emergency department setting.

The primary priority in the resuscitation of pregnant trauma patients is maternal stabilization.^[6] Once stabilization has been achieved, a multidisciplinary approach in the emergency department is essential to ensure comprehensive evaluation and management aimed at optimizing outcomes for both the mother and the fetus.^[7] Adverse pregnancy outcomes may occur even after minor trauma; therefore, thorough assessment and close observation of all pregnant trauma patients are warranted.^[8] International guidelines, including those from the American College of Obstetricians and Gynecologists (ACOG), the Society of Obstetricians and Gynaecologists of Canada (SOGC), and the Eastern Association for the Surgery of Trauma (EAST), recommend an initial period of maternal and fetal assessment following trauma during pregnancy. Continuous fetal monitoring is advised for viable pregnancies, and the need for extended observation is determined based on clinical risk factors.^[9-11]

Previous studies examining trauma during pregnancy have reported variable findings regarding the association between clinical or demographic factors and maternal or fetal outcomes.^[12,13] Nevertheless, trauma remains a significant contributor to maternal morbidity and mortality throughout pregnancy. Therefore, emergency clinicians must be well-versed in the appropriate evaluation and management of pregnant trauma patients.^[14] Despite these recommendations, the lack of consistently reliable predictors continues to hinder the development of standardized management strategies for this population.

This study aimed to identify clinical and demographic factors associated with prolonged emergency department observation among pregnant trauma patients.

MATERIALS AND METHODS

Study Design and Patient Selection

This retrospective study included pregnant trauma patients who presented to the Emergency Department of Gaziantep University Şahinbey Research and Training Hospital between January 2014 and January 2024. The study was conducted in accordance with the principles of the Declaration of Helsinki

and received approval from the local ethics committee on May 15, 2024 (Approval number: 2024/121). Detailed reviews of patients' medical records were performed, including laboratory findings, consultation notes, and hemogram parameters.

Of the 563 patient records initially screened, 11 were excluded due to incomplete or insufficient data, and an additional nine patients younger than 18 years were excluded. Patients who developed fetal complications were also excluded, as they were directly admitted to the Department of Obstetrics and Gynecology without undergoing prolonged emergency department observation, making their inclusion inconsistent with the study objective. Furthermore, patients presenting with suicide attempts, toxic exposures, or burn injuries were excluded because these conditions involve substantially different clinical courses, management strategies, and prognoses. Consequently, the final study population comprised patients who sustained trauma due to motor vehicle collisions (including both in-vehicle and pedestrian accidents), physical assaults, or falls.

The SOGC recommends a minimum of 4 hours of fetal monitoring in viable pregnancies following trauma.^[9] The EAST recommends at least 6 hours of cardiocotographic monitoring for pregnant trauma patients beyond 20 weeks of gestation.^[10] A recent EAST systematic review and meta-analysis further conditionally recommends a formal observation period of 4–6 hours for pregnant trauma patients.^[15] In the present study, prolonged observation was defined as emergency department monitoring exceeding 6 hours.

Data Collection

Data were retrospectively extracted from the hospital's electronic medical records for all eligible pregnant trauma patients. The following variables were recorded: maternal age, gestational age at the time of trauma, mechanism of injury (motor vehicle collision, physical assault, or fall), Injury Severity Score (ISS), Rh status, and duration of emergency department observation.

Patients with unstable vital signs or markedly low hemoglobin levels were excluded from the analysis, as these individuals required immediate admission to the intensive care unit or inpatient wards and therefore did not undergo extended observation in the emergency department.

Based on the duration of emergency department observation, patients were categorized into two groups: ≤6 hours (n=221) and >6 hours (n=238). The patient selection process and overall study flow are illustrated in Figure 1.

Emergency Department Management Protocol

Upon presentation to the emergency department, all pregnant trauma patients underwent an initial assessment, including evaluation of vital signs and a primary survey. Focused Assessment with Sonography for Trauma was routinely performed to evaluate for intra-abdominal hemorrhage. In hemodynamically stable patients with minor trauma, consultation with the Department of Obstetrics and Gynecology was requested

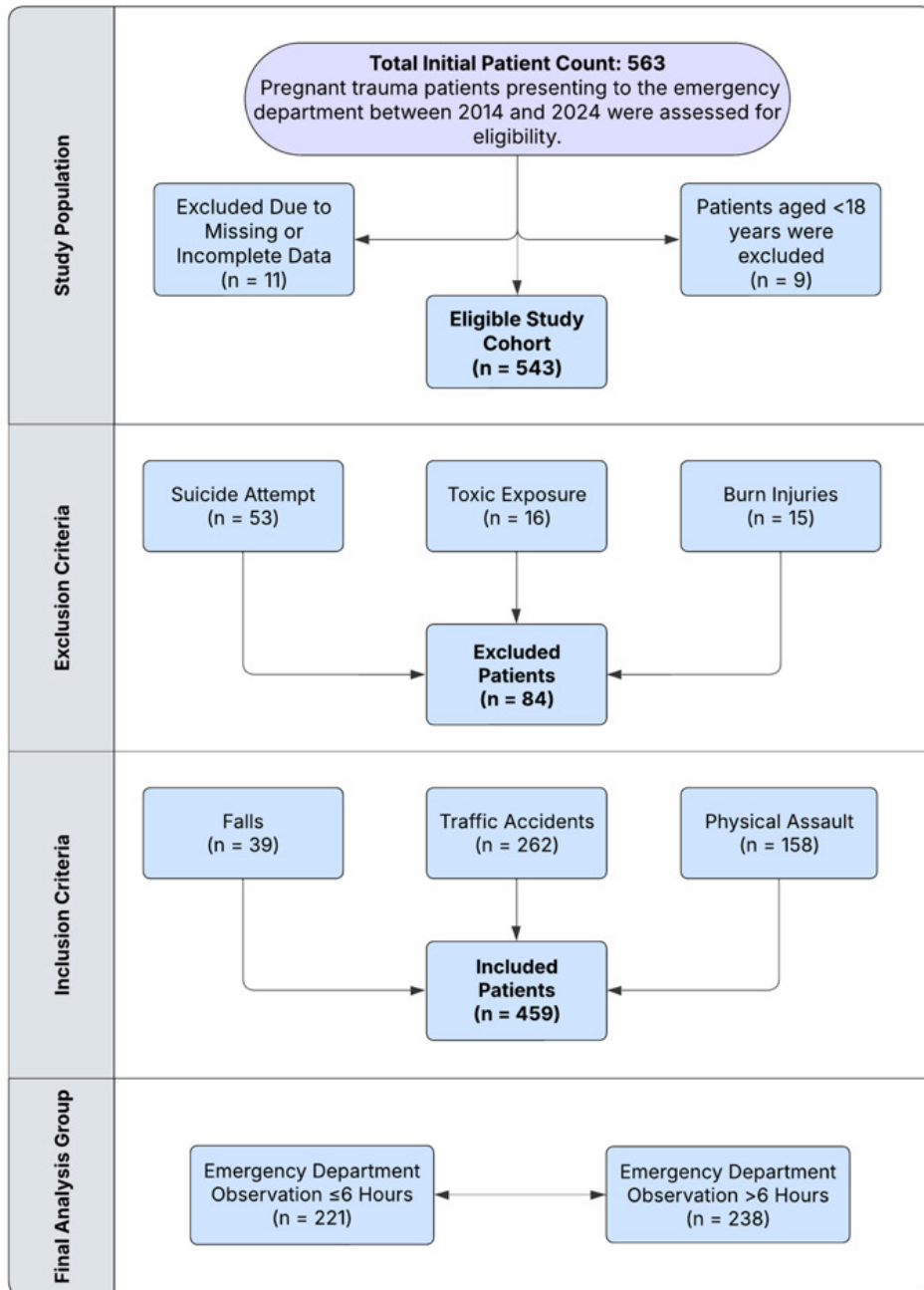


Figure 1. Flowchart of patient selection, exclusion criteria, and final analysis groups.
 Legend: Flowchart illustrating the patient selection and exclusion process, inclusion criteria, and final analysis groups of pregnant trauma patients evaluated in the emergency department between 2014 and 2024. Patients were stratified according to emergency department observation duration as ≤6 hours and >6 hours.

primarily for fetal assessment. Based on clinical findings and trauma severity, patients were observed in the emergency department for a clinically determined observation period, in accordance with standard institutional protocols for the management of pregnant trauma patients. Patients who were hemodynamically unstable or sustained severe trauma underwent immediate stabilization in the emergency department and were subsequently transferred to the intensive care units for further management.

Trauma Severity Assessment

The ISS is an anatomically based scoring system used to quantify trauma severity across six body regions: head and neck, face, chest, abdomen, extremities, and external.^[16] The ISS is calculated by summing the squares of the scores assigned to the three most severely injured body regions. ISS values range from 1 to 75, with higher scores indicating more severe trauma.

Statistical Analysis

Statistical analyses were conducted using R software (version 4.5.0; R Foundation for Statistical Computing, Vienna, Austria). The distribution of continuous variables was evaluated using

the Shapiro–Wilk test. Continuous variables were summarized as medians with interquartile ranges (IQR), whereas categorical variables were expressed as frequencies and percentages. Patients were stratified into two groups according to emer-

Table 1. Demographic and clinical characteristics of pregnant trauma patients according to emergency department observation duration

Variables	Emergency Department Observation ≤6 Hours (n=221)	Emergency Department Observation >6 Hours (n=238)	p-value
Age, years	25 [22–30]	26.5 [22–31]	0.084
Gestational age (weeks)	17 [11–23]	24 [15–32]	<0.001*
Gravidity	2 [1–4]	2.5 [1–4]	0.118
Parity	1 [0–2]	1 [0–2]	0.305
Number of abortions	0 [0–1]	0 [0–1]	0.258
GCS	15 [15–15]	15 [15–15]	0.370
ISS	1 [1–2]	1 [1–4]	0.004*
Number of consultations	1 [1–1]	1 [1–1]	0.031*
Trauma mechanism			
Fall	18 (8.1%)	21 (8.8%)	0.625
Physical assault	81 (36.7%)	77 (32.4%)	
Traffic accident	122 (55.2%)	140 (58.8%)	
Type of traffic accident			
In-vehicle	98 (80.3%)	102 (71.3%)	0.120
Out-of-vehicle	24 (19.7%)	41 (28.7%)	
Type of trauma			
Blunt	206 (93.2%)	221 (92.9%)	0.975
Penetrating	12 (5.4%)	14 (5.9%)	
Mixed (blunt + penetrating)	3 (1.4%)	3 (1.3%)	
Extent of trauma			
Isolated injury	165 (74.7%)	165 (69.3%)	0.244
Multitrauma	56 (25.3%)	73 (30.7%)	
Working hours			
In-hours	95 (43.0%)	105 (44.1%)	0.881
Out-of-hours	126 (57.0%)	133 (55.9%)	
Location of trauma			
Head trauma	39 (17.6%)	41 (17.2%)	1.000
Face trauma	12 (5.4%)	15 (6.3%)	0.843
Thoracic trauma	6 (2.7%)	8 (3.4%)	0.896
Abdominopelvic trauma	75 (33.9%)	95 (39.9%)	0.219
Spinal trauma	19 (8.6%)	26 (10.9%)	0.496
Musculoskeletal trauma	50 (22.6%)	58 (24.4%)	0.741
RhD negativity			
Present	5 (2.3%)	18 (7.6%)	0.017*
Absent	216 (97.7%)	220 (92.4%)	

Continuous variables are presented as median [interquartile range]. Categorical variables are presented as n (%). GCS: Glasgow Coma Scale; ISS: Injury Severity Score; IQR: Interquartile range. Bold values indicate statistical significance at p<0.05.

gency department observation duration: ≤6 hours and >6 hours. Group comparisons were performed using the Mann–Whitney U test for continuous variables and the chi-square test or Fisher’s exact test for categorical variables, as appropriate.

To identify factors associated with prolonged emergency department observation (>6 hours), univariate logistic regression analyses were initially conducted. Variables demonstrating statistical significance in univariate analysis (p<0.05) were subsequently included in a multivariable logistic regression model. Results were reported as odds ratios (ORs) with 95% confidence intervals (CIs). A two-sided p-value <0.05 was considered statistically significant.

Model calibration, discrimination, and multicollinearity were evaluated using the Hosmer–Lemeshow goodness-of-fit test, receiver operating characteristic (ROC) analysis with calculation of the area under the curve (AUC), and variance inflation factors (VIFs), respectively.

RESULTS

A total of 459 pregnant trauma patients were included in the analysis. Of these, 221 (48.1%) were observed in the emergency department for ≤6 hours, and 238 (51.9%) were observed for >6 hours.

Baseline demographic and clinical characteristics of the study population stratified by emergency department observation duration are presented in Table 1. There were no significant differences between the ≤6-hour and >6-hour observation groups with respect to maternal age, gravidity, parity, number of prior abortions, or Glasgow Coma Scale (GCS) scores (all p>0.05).

Gestational age at presentation was significantly higher among patients observed for >6 hours compared with those observed for ≤6 hours (median 24 weeks [IQR: 15–32] vs. 17 weeks [IQR: 11–23], p<0.001). In addition, the ISS was significantly higher in the >6-hour observation group (median 1 [IQR: 1–4] vs. 1 [IQR: 1–2], p=0.004). The number of con-

sultations required during emergency department evaluation was also greater in patients observed for >6 hours (p=0.031).

No statistically significant differences were observed between the groups regarding trauma mechanism, type of trauma, extent of injury (isolated injury vs. multitrauma), working hours at presentation, or anatomical location of injury (all p>0.05). Similarly, the distribution of traffic accident subtypes did not differ significantly between the two groups.

Rh negativity was more frequently observed in patients with emergency department observation lasting >6 hours than in those observed for ≤6 hours (7.6% vs. 2.3%, p=0.017).

Univariate and multivariable logistic regression analyses were conducted to identify factors associated with prolonged emergency department observation (>6 hours); the results are presented in Table 2.

In univariate analysis, higher ISS (OR: 1.21, 95% CI: 1.10–1.34, p<0.001), advancing gestational age (OR: 1.07, 95% CI: 1.05–1.09, p<0.001), greater number of consultations (OR: 3.00, 95% CI: 1.10–8.20, p=0.031), and Rh negativity (OR: 3.44, 95% CI: 1.24–9.52, p=0.017) were significantly associated with prolonged observation.

In multivariable analysis, ISS (OR: 1.20, 95% CI: 1.08–1.35, p<0.001), gestational age (OR: 1.07 per week, 95% CI: 1.04–1.09, p<0.001), and Rh negativity (OR: 3.84, 95% CI: 1.33–11.14, p=0.013) remained independent predictors of emergency department observation exceeding 6 hours, whereas the number of consultations was no longer statistically significant after adjustment.

Model calibration was evaluated using the Hosmer–Lemeshow goodness-of-fit test, which indicated adequate calibration ($\chi^2=11.83$, df=8, p=0.16). The discriminative ability of the multivariable logistic regression model was assessed using ROC analysis, yielding an AUC of 0.72 (Fig. 2). Multicollinearity among the independent variables was examined using VIFs, and all predictors demonstrated low adjusted VIF values, indicating no evidence of multicollinearity.

Table 2. Univariate and multivariate logistic regression analyses of factors associated with prolonged emergency department observation (>6 hours)

Variables	Univariate Analysis			Multivariate Analysis		
	OR	95% CI	p-value	OR	95% CI	p-value
Injury Severity Score	1.21	1.10–1.34	<0.001	1.20	1.08–1.35	<0.001
Gestational age (weeks)	1.07	1.05–1.09	<0.001	1.07	1.04–1.09	<0.001
Number of consultations	3.00	1.10–8.20	0.031	2.83	0.44–18.33	0.275
RhD negativity (present vs. absent)	3.44	1.24–9.52	0.017	3.84	1.33–11.14	0.013

OR: Odds ratio; CI: Confidence interval.

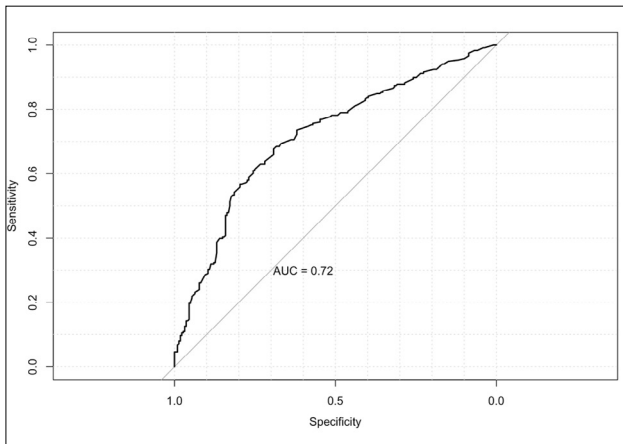


Figure 2. Receiver operating characteristic (ROC) curve of the multivariable logistic regression model predicting prolonged emergency department observation (>6 hours) in pregnant trauma patients. Legend: The area under the curve (AUC) was 0.72, indicating acceptable discriminative ability.

DISCUSSION

In this study, greater trauma severity, as reflected by higher ISS values, was associated with prolonged observation among pregnant trauma patients. Observation duration also tended to increase with advancing gestational age, possibly reflecting heightened attention to fetal monitoring and pregnancy-related considerations in clinical practice. Rh negativity was likewise associated with extended emergency department stays, potentially due to the need for additional evaluation and monitoring in this group. Other clinical variables that demonstrated associations with observation duration in the initial analyses did not remain significant after adjustment for relevant covariates. The adequate model calibration, acceptable discriminative performance (AUC=0.72), and absence of multicollinearity among predictors support the robustness and internal validity of the multivariable model.

The management of pregnant trauma patients in the emergency department is inherently more complex than that of non-pregnant patients because of pregnancy-specific physiological adaptations and fetal considerations.^[17] In particular, determining the need for prolonged observation remains a clinical challenge. The literature addressing factors that influence observation duration in this population is limited. Current guidelines recommend at least four hours of fetal monitoring for pregnancies beyond 23 weeks of gestations following trauma;^[9] however, standardized criteria for determining the need for extended maternal observation have not been clearly established. Most previous studies have focused primarily on the impact of trauma on pregnancy-related outcomes^[18,19] or on indications for hospital admission, rather than on predictors of prolonged emergency department observation. The present study aimed to address this gap by identifying clinical factors associated with extended observation, thereby contributing to a more evidence-based ap-

proach to the management of pregnant trauma patients in emergency care settings.

The role of the ISS in predicting obstetric and perinatal adverse outcomes among pregnant trauma patients has long been debated in the literature. Schiff and Holt reported that ISS does not reliably predict adverse pregnancy outcomes such as placental abruption or fetal demise, and that even relatively minor injuries may be associated with unfavorable pregnancy outcomes.^[20] Similarly, Dalton et al.^[21] found that, among pregnant women sustaining major trauma, ISS may have predictive value at certain threshold levels for severe maternal outcomes, identifying an ISS ≥ 8 as a discriminative cutoff for serious maternal adverse events. In a cohort study, Genç et al.^[22] observed that hospitalization rates were significantly higher among patients with ISS ≥ 9 , while also noting that perinatal complications could still occur even in patients with lower ISS values.

Taken together, these findings suggest that ISS has a limited utility in directly predicting obstetric or perinatal outcomes but may instead function as an indicator of overall trauma severity. Consistent with this interpretation, ISS was significantly associated with prolonged observation duration in our study in both univariate analysis (OR: 1.21, 95% CI: 1.10–1.34, $p < 0.001$) and multivariable logistic regression analysis, in which it remained an independent predictor (multivariable analysis: OR: 1.20, 95% CI: 1.08–1.35, $p < 0.001$). In this context, the association between higher ISS values and prolonged emergency department observation in our cohort likely reflects an increased need for clinical monitoring driven by trauma severity rather than obstetric or perinatal risk per se.

Weiner et al.^[23] evaluated 946 pregnant women with minor trauma and reported that those hospitalized for 24-hour observation had a higher gestational age at the time of injury than those managed as outpatients (30.8 vs. 29.1 weeks, $p < 0.001$), despite no differences in obstetric or neonatal outcomes and no cases of placental abruption or intrauterine fetal demise. Similarly, Soysal et al.^[24] demonstrated that the likelihood of recommending hospitalization after traffic-related trauma increased with advancing gestational age. Patients with minor trauma who declined hospitalization did not experience adverse outcomes, supporting the notion that extended monitoring in later pregnancy may primarily reflect precautionary clinical practice rather than an inevitable increase in risk. Consistent with these findings, our study demonstrated that advancing gestational age was independently associated with prolonged emergency department observation. Patients observed for ≥ 6 hours had a significantly higher median gestational age than those observed for < 6 hours (24.0 weeks [IQR: 15–32] vs. 17 weeks [IQR: 11–23], $p < 0.001$). Moreover, in multivariable analysis, each additional week of gestation was associated with a 7% increase in the odds of extended observation (OR: 1.07, 95% CI: 1.04–1.09, $p < 0.001$).

Fetomaternal hemorrhage may occur following various types of trauma and can lead to fetal anemia, intrauterine fetal demise, or maternal isoimmunization.^[25] International guidelines recommend the administration of anti-D immunoglobulin to RhD-negative pregnant trauma patients. Tests such as the Kleihauer–Betke assay are used to evaluate fetomaternal hemorrhage and guide clinical management, including the consideration of additional dosing when indicated.^[9,10]

In the present study, Rh negativity was identified as an independent predictor of prolonged emergency department observation. This association remained significant in both univariate analysis (OR: 3.44, 95% CI: 1.24–9.52, $p=0.017$) and multivariable logistic regression analysis (OR: 3.84, 95% CI: 1.33–11.14, $p=0.013$). This association may reflect the additional diagnostic evaluations and clinical precautions required for RhD-negative patients following trauma, including assessment for fetomaternal hemorrhage and confirmation of appropriate anti-D immunoglobulin administration. Accordingly, prolonged observation in this subgroup may be attributable to clinical management considerations rather than to an inherently increased obstetric or perinatal risk.

Although the number of consultations was associated with prolonged observation in univariate analysis, this relationship did not persist after adjustment for trauma severity and gestational age. This finding suggests that consultation frequency reflects the inherently multidisciplinary and precautionary nature of pregnant trauma evaluation rather than serving as an independent determinant of observation duration.^[7,14]

This study has several limitations that should be considered when interpreting the results. Owing to its retrospective design, the analysis was restricted to data routinely documented in the emergency department. In addition, the absence of key sociodemographic variables, such as socioeconomic status, race, and ethnicity, limited the assessment of social determinants that may influence observation duration. Data regarding the time interval between the traumatic event and arrival at the emergency department were also unavailable, precluding evaluation of potential delays related to healthcare access. As this was a single-center study conducted at a tertiary referral hospital, the generalizability of the findings to other clinical settings may be limited.

Furthermore, reliance on electronic medical records precluded determination of whether patients discharged after observation subsequently sought care at other institutions. Patients requiring immediate admission to the intensive care unit or management by non-emergency specialties may also have been underrepresented in the study population.

Despite these limitations, this study has several notable strengths. To our knowledge, it is among the first investigations specifically designed to evaluate factors associated with emergency department observation duration in pregnant trauma patients. The inclusion of a 10-year cohort from a high-volume tertiary care center enhances the relevance

of the findings to real-world clinical practice. Moreover, the identification of trauma severity, quantified by the ISS, as a predictor of prolonged observation adds to the limited body of literature addressing this issue. These findings may inform future prospective investigations and support the development of more standardized, evidence-based triage and observation strategies for pregnant trauma patients.

CONCLUSION

In summary, greater trauma severity (as reflected by higher ISS), advancing gestational age, and RhD negativity were independently associated with emergency department observation exceeding 6 hours among pregnant trauma patients. Although the number of consultations was significantly associated with prolonged observation in univariate analysis, it did not remain an independent predictor after adjustment in the multivariable model.

Ethics Committee Approval: This study was approved by the Gaziantep University Ethics Committee (Date: 15.05.2024, Decision No: 2024/121).

Peer-review: Externally peer-reviewed.

Authorship Contributions: Concept: İ.T., M.B., M.S.Ç., M.H.B.; Design: İ.T., M.B., M.H.B.; Supervision: İ.T., M.B., M.H.B.; Resource: M.S.; Data collection and/or processing: M.S.Ç., M.S.; Analysis and/or interpretation: M.S.Ç., İ.T., M.B., M.S.B., M.H.B.; Literature review: İ.T., M.S.; Writing: M.S.Ç.; Critical review: İ.T., M.B.

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ORJİNAL ÇALIŞMA - ÖZ

Acil serviste travmaya maruz kalan gebe hastalarda gözlem süresinin uzamasını öngören faktörler

AMAÇ: Gebelikte travma, fizyolojik adaptasyonlar ve fetal iyilik hâlinin korunması gerekliliği nedeniyle kendine özgü klinik zorluklar oluşturur. Kılavuzlar travma sonrası anne ve fetus için asgari bir izlem süresi önermesine rağmen, gebe travma hastalarında acil serviste uzamış gözlem süresi ile ilişkili faktörler yeterince tanımlanmamıştır. Bu faktörlerin belirlenmesi, klinik karar verme süreçlerinin ve acil servis kaynak kullanımının optimize edilmesine katkı sağlayabilir.

GEREÇ VE YÖNTEM: Bu retrospektif kohort çalışma, Ocak 2014–Ocak 2024 tarihleri arasında üçüncü basamak bir acil serviste yürütülmüştür. Hastalar acil serviste gözlem süresine göre ≤6 saat ve >6 saat olarak iki gruba ayrılmıştır. Demografik özellikler ve Travma Şiddet Skoru (Injury Severity Score, ISS), gebelik haftası, RhD durumu, travmanın özellikleri ve konsültasyon gereksinimi gibi klinik değişkenler kaydedilmiştir. Uzamış acil servis gözlem süresini etkileyen faktörleri belirlemek amacıyla tek değişkenli ve çok değişkenli lojistik regresyon analizleri yapılmıştır.

BULGULAR: Toplam 459 gebe travma hastası analiz edilmiştir ve bunların 238'i (%51.9) acil serviste 6 saatten uzun süre gözlenmiştir. Uzamış gözlem grubundaki hastaların gebelik haftası, ≤6 saat gözlenen hastalara göre anlamlı olarak daha yüksektir (medyan 24 [IQR 15–32] hafta vs. 17 [IQR 11–23] hafta, $p<0.001$). Çok değişkenli analizde, ISS değerlerindeki artış (OR 1.20; %95 GA 1.08–1.35; $p<0.001$), artan gebelik haftası (hafta başına OR 1.07; %95 GA 1.04–1.09; $p<0.001$) ve RhD negatifliği (OR 3.84; %95 GA 1.33–11.14; $p=0.013$) acil serviste 6 saatten uzun gözlem ile bağımsız olarak ilişkili bulunmuştur. Konsültasyon sayısı tek değişkenli analizde uzamış gözlem ile ilişkili olsa da, çok değişkenli analizde bağımsız bir faktör olarak kalmamıştır.

SONUÇ: Artmış ISS, ilerleyen gebelik haftası ve RhD negatifliği, gebe travma hastalarında acil serviste 6 saatten uzun gözlem süresi ile bağımsız olarak ilişkilidir.

Anahtar sözcükler: Acil servis; gebelik; hasta gözlemi; Rh alloimmünizasyonu; travma şiddet skoru; travma.

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