ORIGINAL RESEARCH PAPER

Medical Science

CLINICAL VALIDATION OF MODI.IED LRINEC SCORE IN DIAGNOSING NECROTISING FASCIITIS IN THE CONTEXT OF SOFT TISSUE INFECTION: A PROSPECTIVE OBSERVATIONAL STUDY

KEY WORDS:

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INTRODUCTION

Necrotizing fasciitis is a rapidly progressive in.lammatory infection of the fascia, with secondary necrosis of the subcutaneous tissues. The speed of spread is directly proportional to the thickness of the subcutaneous layer. Necrotizing fasciitis was .irst described in 500 BC by Hippocrates. The .irst description of present-day NF was made by Joseph Jones in 1871. Trauma is the most common identi.iable etiology. The most frequent comorbidity in patients with NF is diabetes mellitus. HPE is the gold standard for diagnosing NF.

Modi.ied Lab Indicators:

Age, Immunocompromised state, Total WBC count, Hemoglobin, Sodium, Potassium, Glucose, Serum creatinine, CRP

AIMS & OBJECTIVES

Aim:

To validate the modi.ied LRINEC scoring system for diagnosing necrotizing fasciitis among patients presenting with soft tissue infections.

Objectives:

- To evaluate whether risk categorization using Modi.ied LRINEC score is appropriate
- To .ind sensitivity and speci.icity of M-LRINEC scoring system.

S.NO.	VARIABLE	RANGE	SCORE
1	AGE	18 - 45	1
		45 - 60	2
		>60	3
2	IMMUNO COMPROMISED STATE	ABSENT	0
		PRESENT	2
3	RANDOM BLOOD SUGAR	180 OR LESS	0
		>180	1
4	C- REACTIVE PROTEIN	NEGATIVE	0
		POSITIVE	2
5	TOTAL WBC COUNT / mm3	<15	0
		15 - 25	1
		>25	2
6	HEMOGLOBIN	>13.5	0
		11 – 13.5	1
		<11	2
7	SERUM SODIUM	135 OR MORE	0
		<135	2
8	SERUM POTASSIUM	5 OR LESS	0
		>5	2
9	SERUM CREATININE	1.4 OR LESS	0
		>1.4	2

METHODOLOGY

A prospective observational study was conducted over 18 months on 25 patients above 15 years. After detailed history, clinical examination, and investigations, baseline tests including CBC, CRP, GRBS, RFT, serum electrolytes were done. M-LRINEC scoring was applied. Tissue samples were sent for HPE (gold standard). Blood investigations were compared with HPE .indings.

Modi.ied LRINEC score

INCLUSION CRITERIA

All patients with soft tissue infections presenting at Rajarajeshwari Medical College & Hospital.

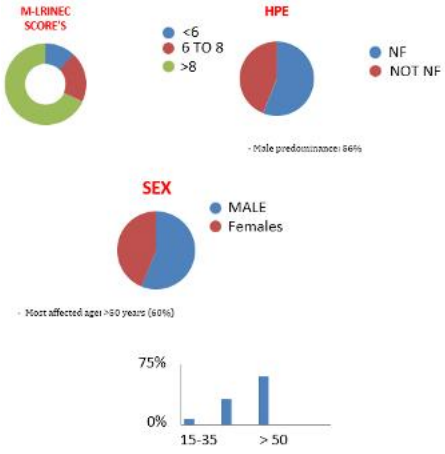
EXCLUSION CRITERIA

- Patients below 15 years
- Patients already surgically debrided elsewhere
- Patients with boils/furuncles without cellulitis

STATISTICAL ANALYSIS

Data analyzed using descriptive and inferential statistics using Excel and SPSS.

RESULTS



- WBC: 15–25k (48%)
- CRP positive: 52%
- RBS >180: 68%
- Hb 11–13: 40%
- Immunocompromised: 48% (DM most common)
- M-LRINEC >8: 68%
- HPE positive: 56%

DIAGNOSTIC ACCURACY (M-LRINEC >8)

- Sensitivity: 92.9%
- Speci.icity: 63.6%
- PPV: 76.5%
- NPV: 87.5%
- Relative Risk: 6.12

RESULT

- Youngest patient in this series was 26 years and oldest in this series was 74 years.
- Most common age group 50-70 years .
- Mean age of incidence was 54.44 .
- 68 % of patients who presented with soft tissue infection had M-LRINEC >8 .

- Among the HPE samples sent for 25 patients , 56 % came to be positive for necrotizing fasciitis.

DISCUSSION

- Necrotizing fascitis is a surgical emergency . Early recognition and prompt aggressive surgical debridement of all necrotic tissue is critical for survival.
- Of the 48% immuno-compromised , diabetes was the most common associated co- morbidity .
- Of the participants, 60 % were > 50 years age.
- 70% of patients with m-lrinec score >8 had positive CRP values .
- HPE still remains the gold standard for diagnosis.

CONCLUSION

- High sensitivity : making it useful for identifying patient at risk .
- Moderate specificity : chances of false poistive cases .
- M-LRINEC score is a reliable & sensitive tool for predicting NF & a score >8 is strongly associated with positive HPE finding .