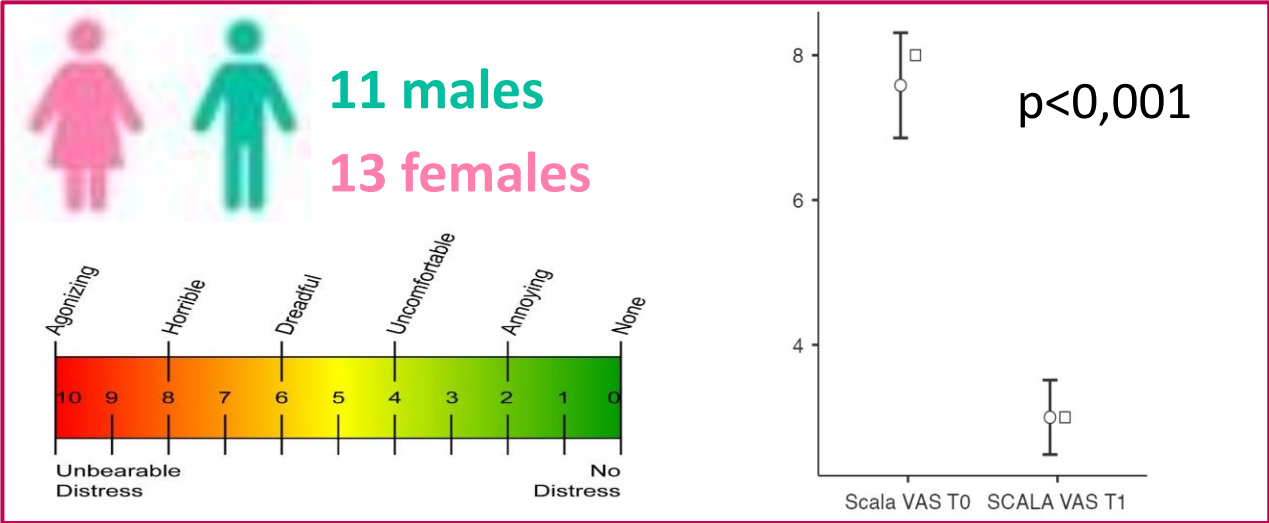


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INTRODUCTION

Colic pain has a significant impact on clinical management in emergency room. The purpose of this study is to examine the relationship existing between colic pain presentation and ecg alterations.

MATERIALS AND METHODS

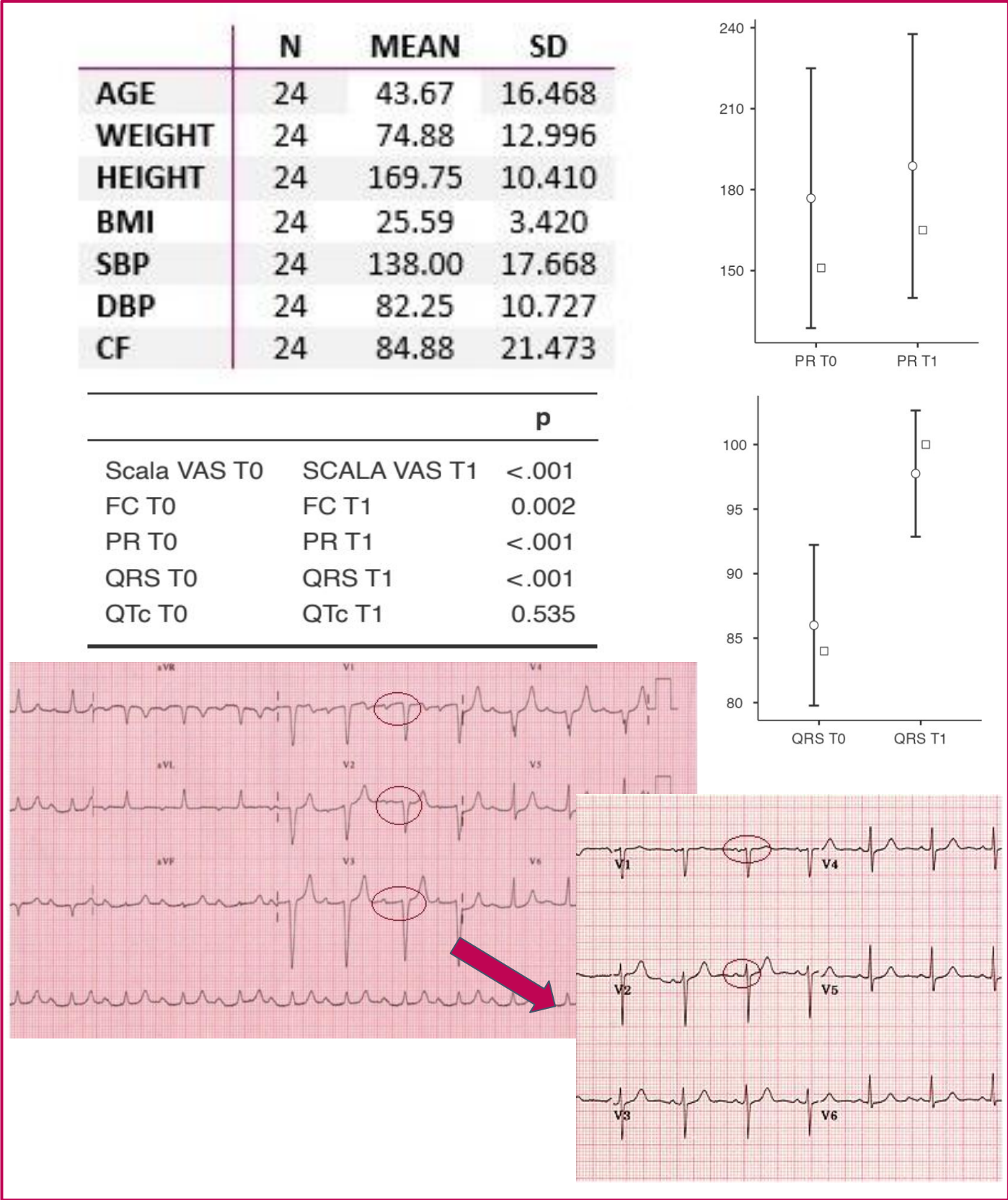


All patients underwent blood sample collection , urine dipstick tests and an ECG performed at T0 and at T1.

This observational study was conducted in the Emergency Department (ED) of “San Paolo” Hospital (BARI) and “Lorenzo Bonomo” Hospital (ANDRIA,BARI) throughout two months. Inclusion criteria consisted of adult patients aged 18–75 years who presented with acute flank pain and a clinical diagnosis of renal colic, confirmed by either ultrasound approach or CT imaging. The patients with other causes of acute abdominal pain or chronic conditions, such as severe kidney disease, pyelonephritis, abdominal hernias, appendicitis, were excluded.

We analyzed 24 patients (11 males and 13 females; aged 43,67±16,47 years). Pain intensity was measured with the Visual Analog Scale (VAS) at enrollment initial presentation (T0), and after drug administration of analgesia (T1).

RESULTS AND DISCUSSION



The 37% of the patients received intravenous treatment with NSAIDs and paracetamol, 16% received opioids, and among these 41% received combination therapy. Pain reduction was observed in 100% of patients, with an average reduction in VAS scores (p<0,001), within the first hour.

A significant alteration of ECG changes during acute pain episodes (T0) was overall observed in 46% of patients. These changes included ST in 7 patients, STEMI in 1 patient, SVES in 2 patients, I-AVB in 1 patient. All of them were resolved following pain relief (T1). ECG changes may reflect the stress response to intense pain, mediated by sympathetic activation that, as its peak, causes both positive chronotropic and inotropic effects.

QTc interval, normalized for heart rate, should not be influenced by sympathetic tone. However, it shows a tendency towards significance (0.06). In only one case ECG showed a long term cardiovascular effect, presenting STEMI even after pain resolution.

The average pain score of 8-10 at presentation reflects the severity of the condition and the urgent need for prompt analgesic intervention.

CONCLUSIONS

Our study highlights the importance of interplay between acute renal colic pain and ECG transient abnormalities in the ED, which may not necessarily indicate a cardiac emergency but rather a response to acute pain, in order to avoid unnecessary cardiac investigations in these patients.

Affiliazioni

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RESEARCH ABSTRACT - CARDIOLOGY