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Evaluation of Polymorphonuclear Leukocyte Erastase in Patients with Cardio-Pulmonary Arrest on Arrival

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Objective: Plasma polymorphonuclear leukocyte erastase (PMNE) levels were studied in patients with cardiopulmonary arrest on arrival, to evaluate whether this enzymatic activity correlates with the severity of the patients.
Method: Twenty-three patients were selected randomly among the patients with cardiopulmonary arrest. These were classified into two groups: 1) patients who were resuscitated and regained a heartbeat (R group); and 2) patients who could not be resuscitated (N group).
Result: Six patients were in R group, and 17 patients in the N group The cause of illness, age, and gender were similar for both groups. The value of myoglobin was 209.0 ±87.0 mg/dl (mean ±SD) in R group and 1788.0 ±672.7 mg/dl in N group. The value of PMNE in R group 383.3 ±60.3 ug/l and 1065.2 ±209.4 ug/l in N group. The difference in myoglobin and PMNE values of two groups were statistically significant with *p*-value of .05 and .01 respectively. There were no significant differences in the values of WBC, GOT, GPT, LDH, CK, and pH.
Conclusion: This study suggests that the measurement of plasma PMNE levels in the patients with cardiopulmonary arrest on arrival is valuable to help to predict the prognosis. This appears to indicate that the plasma PMNE levels could be useful parameters within which to evaluate the severity of stress.

TECHNIQUES IN EMERGENCY MEDICINE AND REANIMATOLOGY

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The Chain of Informatics in Emergency and Disaster Medicine

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Every ambulance mission incorporates a chain of information, which can be described:

Alarm procedure => Address information (including telephone number, door lock code, etc.) => Patient and symptom information => Positioning (of address and nearest available ambulance) => Directing => Exchange of information and "status reporting" during mission (ambulance <=> unit/receiving hospital/other expert unit) => Measured data and corresponding information => Record handling => Evaluation

The classical system—"talk on the radio and write"—has the following characteristics:
1) *Slow* with the inherent risk of radio queue formation vis-a-vis the directing unit;
2) *Poor privacy;*
3) *Risk for misinterpretation* of information (e.g.: bad radio contact;
4) *Repeated handling* of the same data, first in the directing unit, then in the ambulance, demanding hand-written notes, etc.;
5) *Time-consuming* paperwork, record writing during/after each mission;
6) Evaluation of the work performed demands a *lot of work*;
7) *?Easy to understand?*; and
8) *This is what we've always had.*

A computerized system for receiving alarms, positioning, directing, status reporting, hospital pre-warning and record handling/evaluation, can be designed to receive all information once and then automatically transfer it into the right positions, so that every piece of information needs to be handled only once. The number of keys pressed and written messages is reduced to a minimum.
Example #1. Date, ambulance number, station, and crew is logged into the ambulance computer terminal once in the beginning of every shift, and then is transferred automatically to each record made by this car, until the information is changed.
Example #2. Patient information (name, address, etc.), once treated in the alarm/directing unit computers is transferred directly into the ambulance record, created in the car terminal.
Example #3. The ambulance-status report time information (alarm received, arrived at place of pick-up, patient loaded into ambulance, arrived at emergency unit, ready at emergency unit, ready at the station, ready by paging) is transferred automatically into the ambulance record.

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