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A novel clinical data management platform for acute pancreatitis

Keywords: Acute pancreatitis; Clinical data management; Structured data; Multi-center

Research summary

This article mainly focuses on the novel clinical data management platform for acute pancreatitis. It has the following characteristics:

- The pre-structured standard data fit the characteristics of acute pancreatitis and can be directly used for scientific research;
- A permanent database of complete real-world cases;
- Multiple directions of disease can be studied simultaneously;
- Retrospective, cross-sectional, prospective, and real-world studies can be carried out on this data platform;
- The multi-center whole network experimental progress process saves time and improves quality.

Innovation points

•The design concept of "pre-structured data" effectively addresses the challenge of establishing a uniform data structure in multi-center studies, and synchronized data management during the treatment process ensures standardized handling.

Infection Module

Infection profile

Start Stop The start and end time of the infection

Characterization of Infection: Example: Escherichia coli infection in the tail of the pancreas

Infection related lab examination

Tmax: 39 °C Lymphocyte Proportion: 20 % Platelet: 100 10⁹

Leukocyte: 10 10⁹ Hemoglobin: 120 g/L CRP: 20 mg/L

Neutrophil Proportion: 80 % Hematocrit: 40 % Procalcitonin: 8 µg/L

Test about fungal infection

G Test: pg/L Specimen: Bile Pleural effusion Optional

GM Test: negative positive Specimen: Cerebrospinal fluid

Fungus Experiment

Information of glucocorticoid use

Glucocorticoid Start Stop Start and end time of glucocorticoid use

Type: Hydrocortisone Methylprednisolone Prednisone Dose: mg

Treatment

Test about bacterial infection

Anti-negative Bacteria: Drug name Start Stop Use start and end time

Anti-positive Bacteria: Drug name Start Stop Use start and end time

Antifungal: Drug name Start Stop Use start and end time

Antivirus: Drug name Start Stop Use start and end time

Others: Drug name Start Stop Use start and end time

Immunopotentiator: Drug name Start Stop Use start and end time

Infective Site: Blood stream Lung Specimen culture

Specimen: Stool Urine Wound

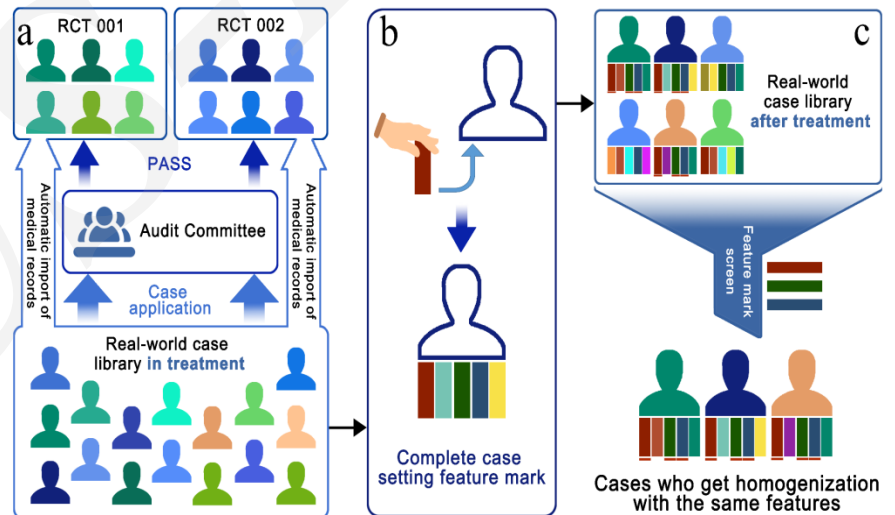
Sputum

Microorganism: Burkholderia cepacia Drug sensitivity

Drug Resistance: ESBLs

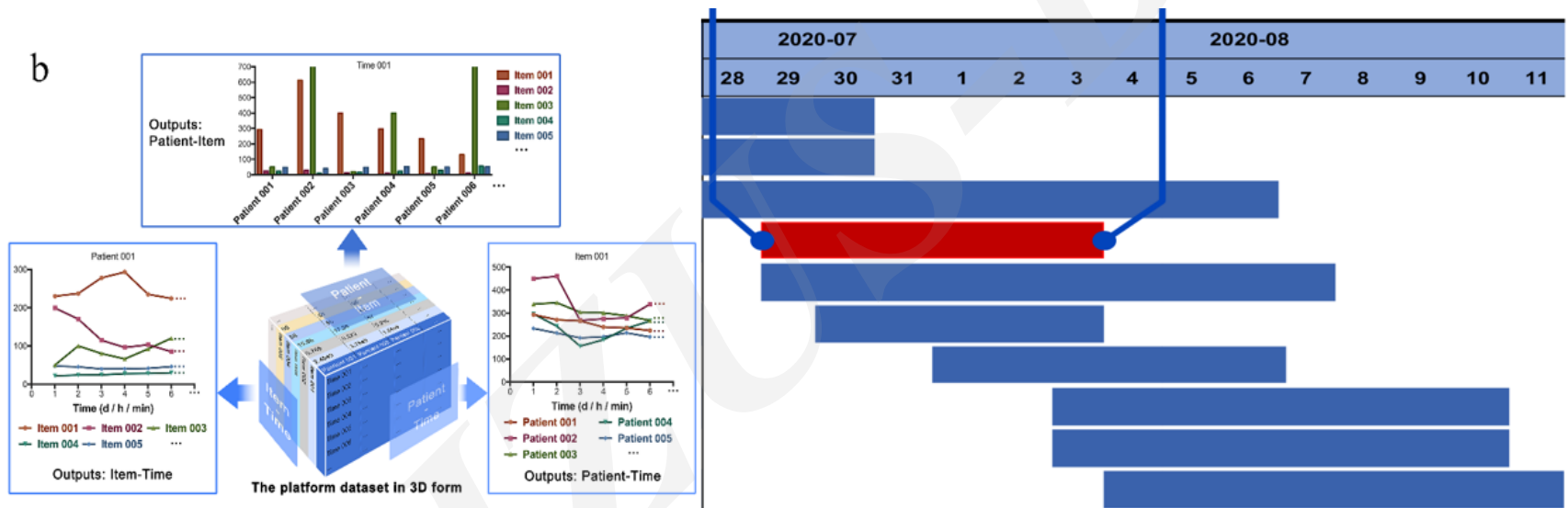
Sensitive Antibiotics: Imipenem MIC:

•Research mode of RCT and establishment and retrieval of homogeneous patients based on feature marks.



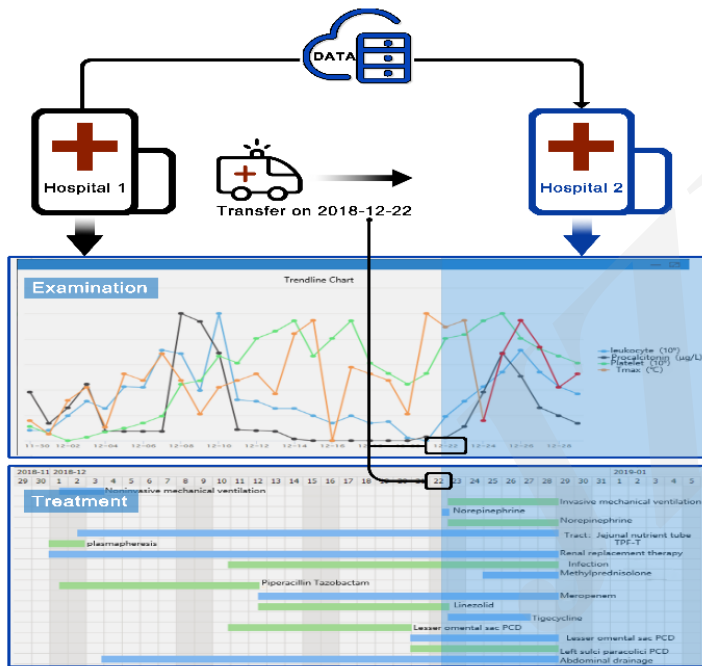
Innovation points

- The application of trend charts and Gantt charts, widely utilized in various fields, to the data platform along with the integration of EXCEL table's 3D data export function enables researchers to enhance their comprehension of data.



Innovation points

- The secure storage of local data and transmission of desensitized data on the cloud server serve as technical safeguards for ensuring safe and efficient multi-center collaboration among medical centers.



- The design of the data platform will be continuously enhanced based on clinical experience, user feedback, and research advancements. All personnel in medical centers utilizing the platform are encouraged to actively contribute to its long-term development, ensuring robust growth and improvement.

