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REVIEWER'S REPORT

Manuscript No.: JNHM- 178

Title: Retrospective Epidemiological Study of Hydatid Cyst Disease in Babylon Governorate, Iraq.

Recommendation:

Accept after minor revision

Rating	Excel.	Good	Fair	Poor
Originality			✔	
Techn. Quality			✔	
Clarity		✔		
Significance	✔			

Reviewer's Name: Bilquees Hamza

Detailed Reviewer's Report

General Overview

This manuscript presents a retrospective hospital-based epidemiological investigation evaluating the demographic, clinical, and anatomical characteristics of cystic echinococcosis (CE), or hydatid cyst disease, among patients managed at Hilla Teaching Hospital in Babylon Governorate, Iraq. The study evaluated $N = 218$ medical records covering a one-year period (January 2025 to January 2026), identifying 26 positive cases of hydatid cyst disease, establishing a hospital sample positivity rate of 11.93%.

Data extraction encompassed demographic factors (age, sex, rural versus urban residence, educational background, occupational status, household income) and clinical variables (anatomical site, clinical presentation, primary versus recurrent infection status). Data were analyzed using IBM SPSS version 24.0 utilizing Pearson's chi-square test for categorical associations and Student's t-test for continuous variables, with significance established at $P \le 0.05$.

The primary empirical findings include:

- **Prevalence and Sex Distribution:** Out of 218 evaluated records, 26 cases (11.93%) were positive for hydatid disease. Females accounted for 69.23% ($18/26$) of positive cases compared to males (30.77%, $8/26$), though the association with sex was not statistically significant ($P = 0.410$).

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- **Age Distribution:** Infection occurred across ages 1 to 70 years, peaking in the 21–30 age group (15.09% group prevalence; 8 cases), followed closely by the 41–50 age group (15.63% group prevalence; 5 cases), with no statistically significant age association ($P = 0.685$).
- **Socioeconomic Context:** A higher proportion of cases originated from rural areas (52.75%) compared to urban areas (47.25%). The majority were housewives or unemployed (69.27%), possessed primary education (49.54%), and reported low household income (43.58%).
- **Anatomical Localization:** The liver was the primary site of involvement (73.08%, $19/26$), followed by the lungs (11.54%, $3/26$), with atypical involvement noted in the ovary (3.85%), vagina (3.85%), and other organs (7.69%).
- **Clinical Presentation & Recurrence:** Abdominal pain was the predominant clinical symptom (50.00%), followed by abdominal mass (19.23%) and combined pain/mass (15.38%). First-time infections comprised 88.46% ($23/26$) of cases, while recurrent disease accounted for 11.54% ($3/26$).

The paper provides valuable local epidemiological baseline data that reinforce the persistence of *Echinococcus granulosus* in central Iraq and underscore the need for a One Health preventative policy.

Key Strengths

1. **Relevant Local Context:** Addresses a persistent neglected zoonotic disease in central Iraq, supplementing existing regional data from the Kurdistan Region and Sulaimani Province with baseline data from Babylon Governorate.
2. **Clear Empirical Categorization:** Systematically categorizes clinical presentation, anatomical involvement, and demographic variables, providing clear data on liver versus lung localization and primary versus recurrent cases.
3. **Candid Discussion of Methodological Limitations:** The author explicitly acknowledges the study's constraints, including its single-center retrospective nature, small sample size ($n = 26$ positive cases), potential referral bias, and lack of direct community prevalence generalizability.

Recommendations for Improvement

While the manuscript is conceptually sound and well-organized, the author should address the following minor points prior to final publication:

1. **Fill Missing Institutional Ethical Approval Details:**

In the "Ethical aspects" subsection under Materials and Methods, placeholder text remains: *"approved by the Scientific Research Ethics Committees of the University of..., College of..., Iraq... (Document No....,*

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dated / /, 2024)". The author must replace these ellipses with the exact university, college, document registration number, and formal approval date prior to publication.

2. **Correct Formatting Glitches in Abstract and Text:**
    - In the Abstract Results, fix garbled wording: replace *"There were sixty-nine females.23% of fantastic instances compared to 30.77% of adult men..."* with clean phrasing: *"Females accounted for 69.23% of positive cases compared to 30.77% in males..."*
    - Correct sentence fragments in the text, such as in the Results section (*"11 of the examined members exhibited an ordinary prevalence..."*) and Discussion (*"With fifty-two rural contributions..."*).
3. **Reconcile P-Value Reporting in Table 5:**

In Section "Results" under Table 5, the narrative states that the distribution according to affected organ did not demonstrate a significant difference, but lists $(p < 0.001)$. Clarify whether a chi-square goodness-of-fit test was applied across organ categories and align the descriptive text with the reported p-value.

4. **Standardize Reference Citation Guidelines:**

Ensure all reference entries in the References section strictly adhere to a uniform journal style (e.g., standardizing author initial spacing, journal title abbreviations, and DOI presentations).

Final Evaluation and Verdict

This manuscript delivers a clear, informative retrospective assessment of cystic echinococcosis in Babylon Governorate, Iraq. The statistical presentation is appropriate for a descriptive case series, and the discussion effectively contextualizes the findings within current regional and global literature.

The manuscript is **accepted with minor revisions**. Inserting the missing ethical protocol registration details, correcting typographical/phrasing errors in the Abstract and Results narrative, and standardizing the reference list will render the paper fully ready for publication.