



Isolation and characterization of *E. coli* O157:H7 from human and animals

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Abstract

This study was conducted to show the importance of *Escherichia coli* O157:H7 as an important zoonotic pathogen, which has ability to transmit from animals to human in

Iraq. One hundred fifty fecal samples (50 stool samples from diarrheal children and 50 from cows and 50 from sheep) were collected for isolation of *E. coli* O157:H7. All samples were cultured on MacConkey and Eosin Methylene blue agar. Each *E. coli* growth was confirmed by Gram stain and biochemical tests. Then, all isolated *E. coli* were sub cultured on Sorbitol MacConkey agar plus cefixime potassium tellurite (SMA-CT). The diagnosis was confirmed by Chrom agar™ *E. coli* O157:H7 and incubated aerobically at 37 C° for 24 hours. Latex agglutination test was used to all isolates of *E. coli* O157:H7 to confirm the serotype. The results showed that *E. coli* were isolated in 40 out of 50 diarrheal children stool samples, where only 2(4%) from these isolates were confirmed as *E. coli* O157:H7. The number of *E. coli* isolates from cows and sheep samples were 48 out of 50 and 45 out of 50 respectively, where only 12 (24%) and 10 (20%) isolates were *E. coli* O157:H7 respectively. The study revealed that most diarrheal cases with positive *E. coli* O157:H7 were detected in two children aged 1 year and 4 years. In conclusion, this study revealed the importance of human and ruminants to act as a reservoir for *Escherichia coli* O157:H7.

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