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**Occurrence of verotoxigenic *Escherichia coli* in irrigation waters and its public health implications****Esraa A El-Shafiee, Khaled A Abdel-Moei, Mohga F Badawi and Osman Hamed**  
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The current study was carried out to investigate the occurrence of verotoxigenic *E. coli* (VTEC) in different irrigation waters and tomato. For this purpose, twenty water samples (5 groundwater, 11 surface water and 4 waste water) were collected from irrigation streams in three distinct locations. In addition, 137 tomatoes from the three farms were enrolled in the current study. Isolation of *E. coli* from water samples was performed using membrane filtration technique on Eosin Methylene Blue (EMB) medium while tomato samples were enriched in Tryptic Soya Broth then streaked on EMB plates. *E. coli* was identified through colonial characters; Gram's stain and biochemical reactions while multiplex PCR was performed to identify VTEC. VTEC strains were found in 40% of water samples whereas 8.8% of the examined tomatoes were positive. The highest prevalence of VTEC was recorded in tomatoes irrigated with surface water in contrast VTEC were not found in tomatoes irrigated with groundwater. VT2 gene was the predominate gene among VTEC tomato isolates. In conclusion, detection of VTEC in irrigation water and tomato from the same farm highlights the potential role of irrigation water in the contamination of tomato which has a great public health implication.

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