

***Shigella dysenteriae* AS A CAUSTIVE AGENT FOR DIARRHOEA IN INFANTS
IN SOUTH IMENTI DIVISION IN MERU DISTRICT.**

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ABSTRACT

Diarrhoeal disease is one of the principal causes of death all over the world, and more so in developing countries. In the infant age group, it accounts for more fatalities than any other disease. Roughly 25% of the deaths in infancy are due to diarrhoea. There are very few reports on *S. dysenteriae* in infants and children in whom the disease may not manifest as classical dysentery but also present as acute gastroenteritis or enteritis. This study strives to find out if *S.dysenteriae* is isolated from stools of infants in the study region and if so, to establish the antibiotic sensitivity patterns in south Imenti Division in Meru District with focus on *S. dysenteriae* as a known cause for dysentery and infant diarrhoea. Approximately 5-15% of *S. dysenteriae* cases are fatal, perhaps due to treatment with antibiotics to which the bacteria are resistant to or failure to educate the mothers on the hygiene measures to control re-infections and the use of oral rehydration salts to control dehydration due to diarrhoea. The study establishes *S.dysenteriae* as a common cause of diarrhoea. 140 samples were collected, of which 70 were cases with diarrhoea and 70 controls without diarrhoea. Of the cases, 52% tested positive for *S. dysenteriae*, while 48% tested negative for *S. dysenteriae*. None of the controls had *S.dysenteriae* isolated from their stools. There was a clear correlation between consumption of un-boiled water, poor sanitary conditions, nil formal education and failure to wash hands before handling foods and after visiting the bathrooms and the occurrence of diarrhoea and dysentery. Cleanliness should be emphasized to avert diarrhoea cases occurring. In case of diarrhoea, infants should be screened in order to avoid an imminent crisis of a dysentery epidemic as well as ensure that the infants are treated in time with the antibiotics that have been shown to be effective in the treatment.

There was minimal drug resistance to both first line and second line antibiotics. However, plasmids were isolated from the strains that exhibited the resistance as well as from strains that did not show any drug resistance. No resistance was imparted to the recipient strains by the donor strains during the conjugation experiment. The plasmids isolated therefore may not have coded for resistance, or they may have lost their integrity since heavy molecular weigh plasmids are very unstable.