

Y.N. Poster Displays: Child and adolescent public health

Intussusception before and after anti-rotavirus vaccination introduction (2009-2013) in Italy

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Background

Previous studies have identified a possible relationship between anti-rotavirus vaccines and intussusception risk although not confirmed by post licensure studies. In Italy some administrative regions started to introduce rotavirus vaccination in 2013. Monitoring intussusception in pre and post vaccination era will be crucial to ensure safety of the vaccine program.

Methods

An observational study was carried out to analyze age-specific (0-59 months) Italian trends in intussusception hospitalization rates before (2009–2012) and after (2013) anti-rotavirus vaccine introduction.

Results

A total of 2,728 hospitalizations for intussusceptions were observed in Italy from 2009 to 2013, with a M:F sex ratio of 1.73. Furthermore, 1,001 cases were reported in the age class 0 to 11 months (36.7%). Compared with 2009 (16.4 per 100,000), the hospitalization rate was greater in 2010 (18.8 per 100,000; rate ratio [RR], 1.15), decreased in 2011 (17.6 per 100,000; RR, 0.93), rose up in 2012 (22.0 per 100,000; RR 1.25) and went down in 2013 (21.6 per 100,000; RR, 0.98). In particular, intussusception hospitalization rate decreased where rotavirus vaccine was offered as universal mass vaccination (UMV) or for at risk groups in 2013 (15.3 per 100,000) respect to 2009–2012 (15.7 per 100,000). On the other hand intussusception rates increased in 2013 (24.9 per 100,000) compared to 2009–2012 (20.3 per 100,000) in the Italian area where anti-rotavirus vaccine was not offered or was offered in co-payment.

Conclusions

Intussusception is a rare condition with an undefined etiology that mainly happens in the first months of life and in male sex. Potential association with rotavirus vaccination was still debated in literature. In Italy, in the first year after vaccination introduction was not observed an increase in hospitalization rates for intussusception. In detail, districts with UMV and for at risk group vaccination showed a small decrease in intussusceptions rates.

Key messages

- To monitor intussusception hospitalization rate before and after rotavirus vaccination introduction is strongly recommended
- In Italy intussusceptions rates slightly decrease in administrative regions implementing UMV or for at risk group vaccination strategies