



Total Serum IgE and Specific IgE levels in 10-15 year old Children with Respiratory symptoms and Healthy controls in Sicily and Malta.



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Introduction: The RESPIRA study was performed in the Health District of Gela (Southern Sicily) and Malta in 2012/3 in 11-14 years old schoolchildren (n=2,047) by means of standard respiratory questionnaires (ISAAC), and clinical exam of case and control subjects.

Aims and Objectives: To measure total serum IgE levels in cases (n=127, Male=45) and controls (n=142, Male=64), and specific IgEs in cases (n=90, male=53), and controls (n=82, males=38).

Materials and Methods: Cases reported wheeze and/or use of asthma medications in the last 12 months, while controls answered negatively to both and also to rhinitis in the last 12 months. The method used for Specific IgE's (sIgE) was that supplied by R-Biopharm (R-Biopharm AG, Landwehrstr. 54, D-64293 Darmstadt, Germany). The method was Enzyme Sorbent Test (EAST). The method used for Total IgE (tIgE) was by ELISA supplied by Genetic Diagnostics (Genesis Diagnostics Ltd, Eden Research Park, Henry Crabb Road, Littleport, Cambridgeshire, United Kingdom).

Results: Total Serum IgE (n=269) was raised (>144 IU/l) in 45/127 cases versus 25/142 controls (p=0.0001). In Males 30/76 of cases vs 11/64 controls (p=0.005), while in Females cases 15/51 vs 14/78, (p=0.14). Positive specific IgE (>0.34 U/ml) was noted in at least one allergen in 54/90 cases vs 30/82 controls (p=0.002). HDM was positive in 27/90 cases vs 12/82 controls (p=0.0001), Parietaria positive 12/90 cases vs 2/82 controls (p=0.011), cat 22/90 vs 13/82 controls (p=0.19) in whole sample, while in male subgroup 14/53 of cases were positive vs 4/38 controls (p=0.06). Dog 9/90 cases vs 8/82 controls (p=0.86). Olive positive in 13/90 cases vs 8/82 controls (p=0.48). Alternaria positive in 6/90 cases vs 2/82 controls (p=0.28). Goldenrod Solidago Virgaurea positive in 2/90 cases vs 1/82 controls, and Cladosporium 0/90 cases, 1/82 controls.

Conclusion: Positive Total serum IgE, and specific IGE to HDM and Parietaria in all patients were significantly higher in Cases than in control subjects. IGE to moulds and dog allergen was not significantly different. Positive cat IgE was close to statistical significance in males only.

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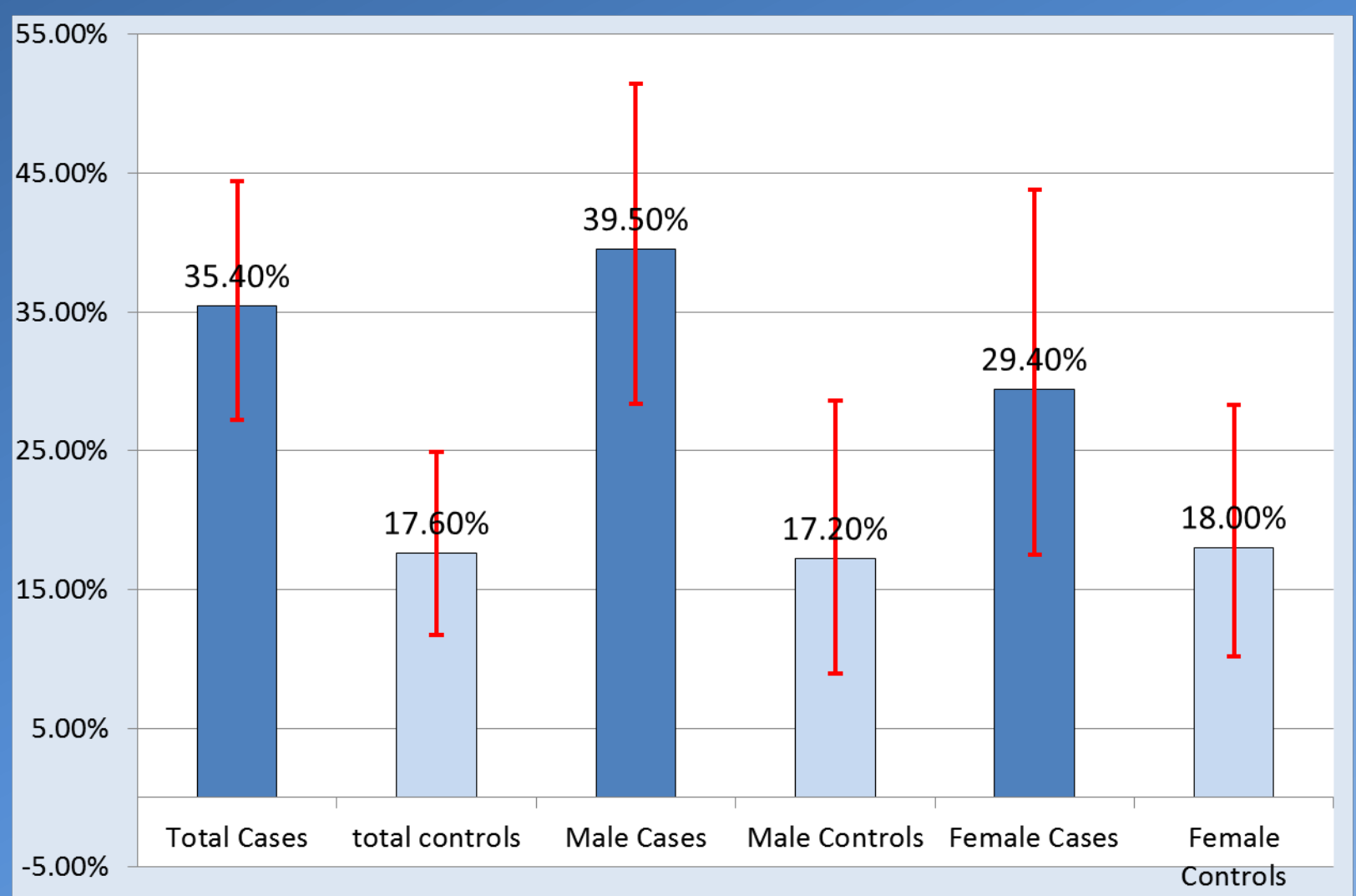


Figure 1. Percentage with raised IGE (>144IU/l) in Cases and controls

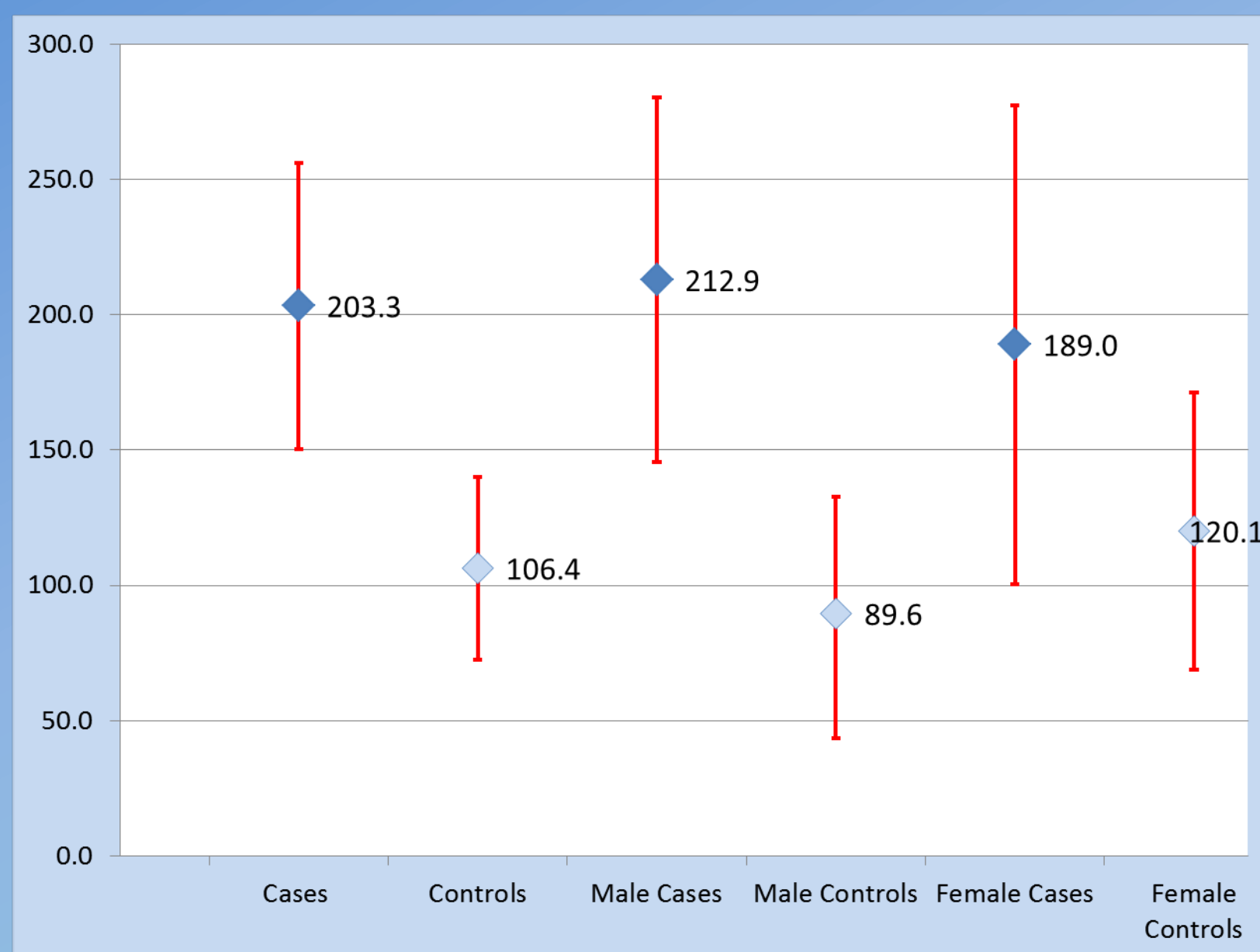


Figure 2. Mean IGE levels IU/L in Cases and Controls

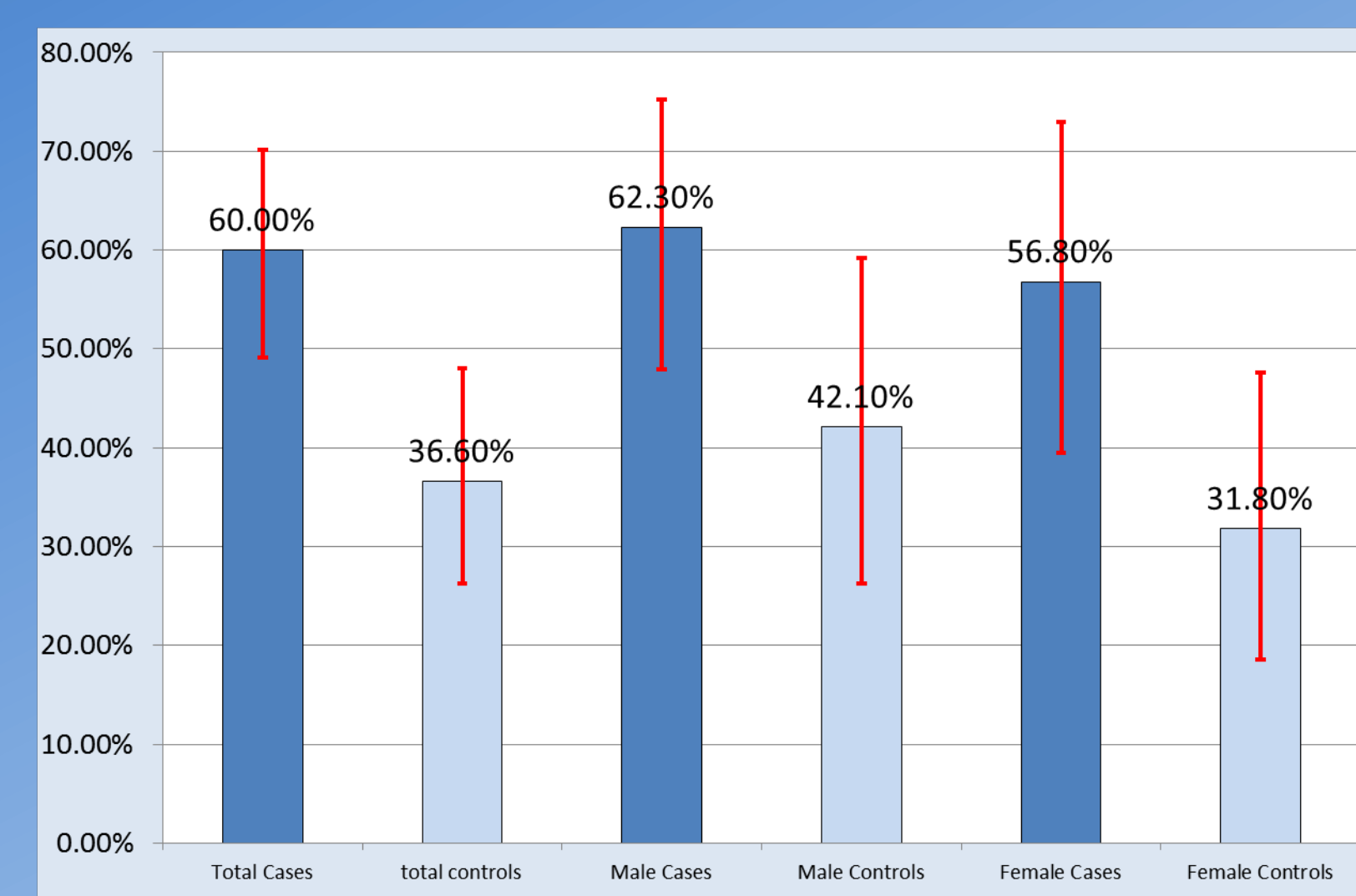


Figure 3. Raised Specific IGE level (>0.34 IU/l) to at least one allergen

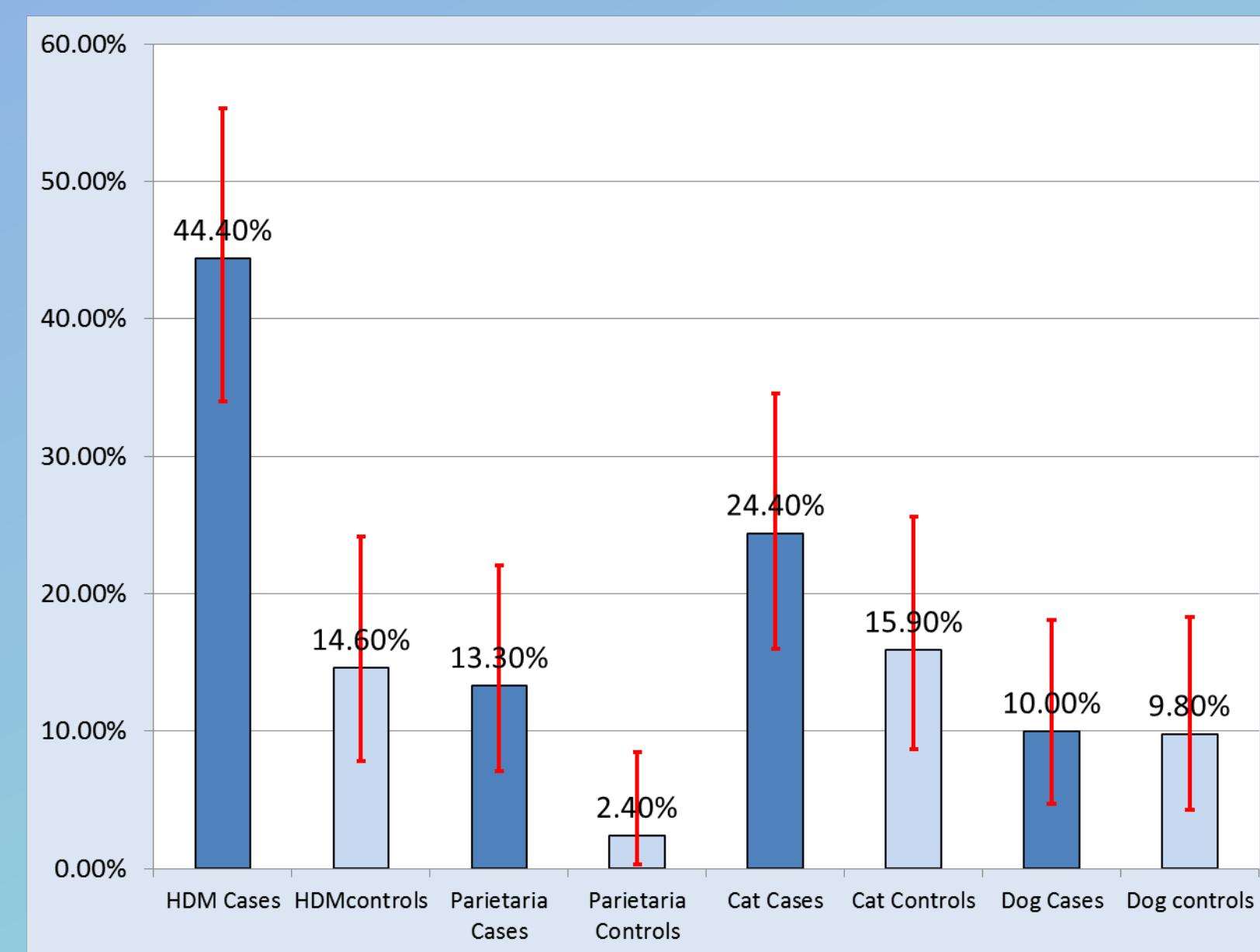


Figure 4. Raised Specific IGE level (>0.34 IU/l) to allergens Cases/Controls

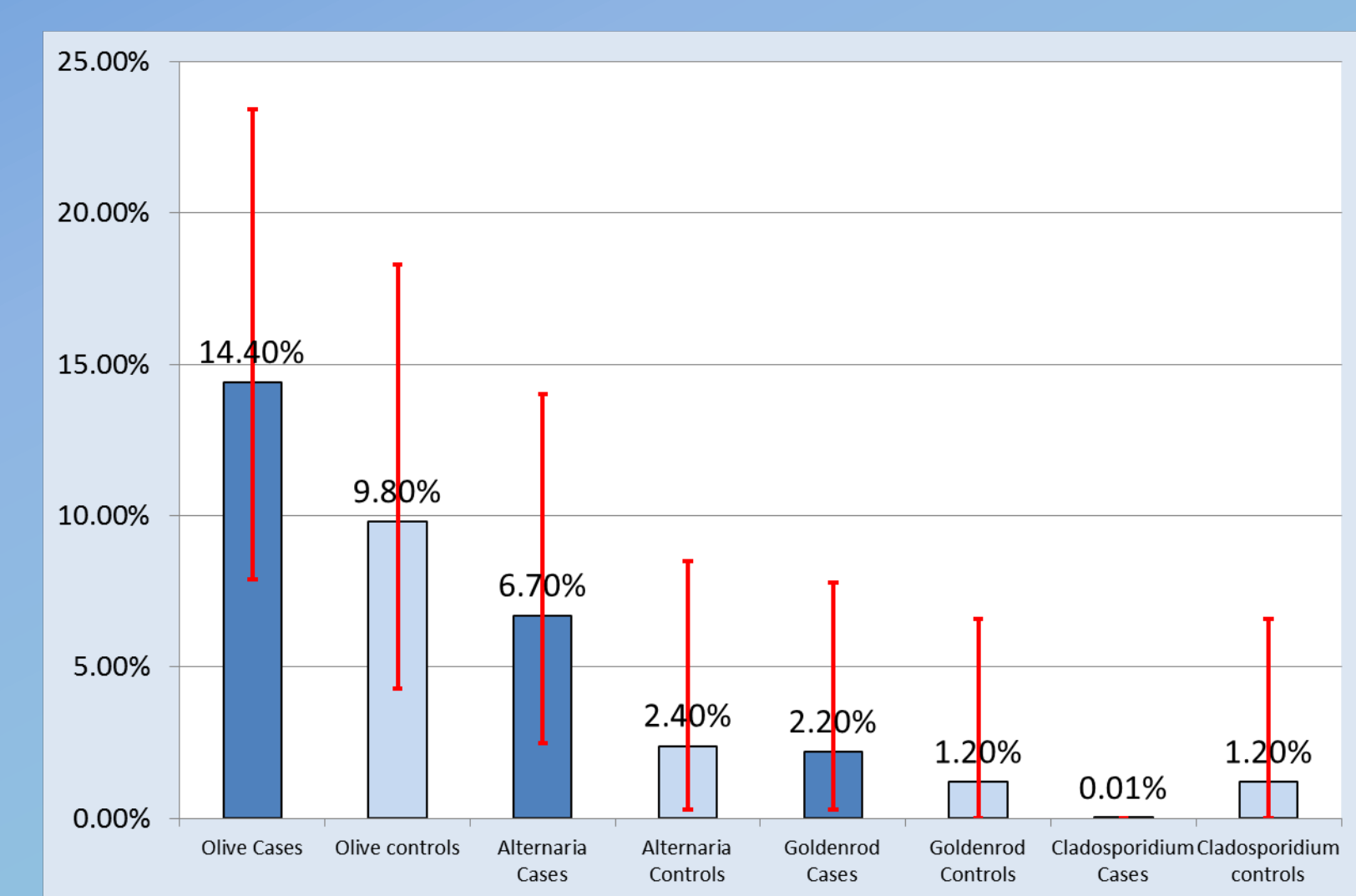


Figure 5. Raised Specific IGE level (>0.34 IU/l) to allergens Cases/Controls



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