**BACKGROUND**

- Hypoparathyroidism (HP) is a group of rare heterogeneous conditions in which the parathyroid glands fail to produce sufficient amounts of parathyroid hormone.
- Due to this heterogeneous nature, information on HP prevalence is highly variable and studies can be difficult to compare.
- HP can be divided into 1) primary HP due to intrinsic defects on the parathyroid glands and 2) secondary HP due to several causes, including neck surgery¹.

**METODS**

- Comprehensive, targeted search of English language literature available in PubMed, EMBASE, and Cochran was conducted.
- Search terms used were (“Hypoparathyroidism” OR “DiGeorge Syndrome” OR “Hypocalcemia”) AND (“incidence” OR “prevalence” OR “epidemiology”).
- Flow diagram based on PRISMA guidelines² was generated (Figure 1).
- Abstracts were reviewed for relevance and full-text articles assessed for inclusion based on the following criteria:
  - Study rigor (using the STROBE checklist³).
  - Case ascertainment methodology.
- To evaluate temporal trends, use was made of detailed information available in the literature regarding change in rates over time.

**OBJECTIVE**

- To estimate the true prevalence of HP within the EU via comparison of available literature and analyses of sub-populations.

**RESULTS**

- All resulting data from the qualifying studies were entered into separate meta-analyses for both non-surgical and post-surgical HP (Figure 2 and Figure 3).
- Based on these analyses the best prevalence estimate for non-surgical HP in the EU was 1.1/10,000 (95% CI: 0.6-1.6 per 10,000) in 2018 and the best prevalence estimate for post-surgical HP in the EU was 2.0/10,000 (95% CI: 1.6-2.3 per 10,000) in 2018.
- To evaluate temporal trends, use was made of detailed information available in the literature regarding change in rates over time. Post-surgical HP has been increasing at a faster rate (growth of approximately 0.03 cases per 10,000 annually) than non-surgical HP (growth of approximately 0.01 cases per 10,000 annually).

**CONCLUSIONS**

- The overall prevalence of HP in the EU is estimated to rise to 3.2/10K population in 2020 with a growth rate of ~0.04/10K population annually.
- Although study criteria and geographies of the included studies were disparate, once separated into non-surgical and post-surgical, results were more consistent.
- The incidence of post-surgical HP appears to be increasing whereas the incidence of non-surgical HP appears to stable.
- These results help inform the epidemiology of both non-surgical and post-surgical HP within the EU.

**REFERENCES**

- ⁴All results provided in the EU are reported in the context of research on the incidence of non-surgical HP, which is the main focus of this study.

**Figure 2: Forest Plot of EU Prevalence Estimates for Non-Surgical HP**

- Overall prevalence estimate: 1.1/10K (95% CI: 0.6-1.6 per 10,000) in 2018.

**Figure 3: Forest Plot of EU Prevalence Estimates for Post-Surgical HP**

- Overall prevalence estimate: 2.0/10K (95% CI: 1.6-2.3 per 10,000) in 2018.

**METHODS**

- Records identified through PubMed/EMBASE/Cochran search (n=1,530).
- Additional records identified through other sources (n=2).
- Records screened (n=1,532).
- Records excluded (n=1,432).
- Full-text articles assessed for eligibility (n=100).
- Full-text articles excluded, with reasons (n=96).

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