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Plasma protein expression pattern in congenital analbuminemia – systematic review protocol

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Abstract

Congenital analbuminemia patients do not express albumin due to genetic mutation. Here a protocol is described for carrying out a systematic review of published case reports on congenital analbuminemia patients. The goal is to assess abundances of a variety of plasma proteins and total plasma protein concentration in this patient population. From the literature search, concentration of individual plasma proteins, plasma protein classes, and total plasma protein concentration is assessed in comparison to reference ranges.

Troubleshooting

Article selection

1 Literature search is carried out using multiple databases for case reports on congenital analbuminemia patients that were written in the English language.

2 Case reports on congenital analbuminemia patients are included in the systematic review when the genetic condition was confirmed or could be reasonably inferred, and if plasma proteins were measured.

3 Exclusion of papers is carried out when patients were diagnosed with another acute or chronic disease or illness, except conditions expected to be reasonably common in the overall human population (obesity, hypercholesterolemia). Reports of patients with edema would not be excluded because edema could be directly related to congenital analbuminemia.

Protein Selection from the included articles

4 Total plasma protein concentrations are included in the analysis.

5 Individual proteins or protein classes are included in the analysis if reported in at least 3 patients of the same sex.

6 It is ascertained if the protein abundance is above, within, or below the clinical reference range.

7 The relative frequency of a protein abundance being above or below the reference range is used to determine the strength of the association with congenital analbuminemia .