

## ABSTRACT

### PROGNOSTIC FACTORS IN FUNCTIONAL OUTCOMES OF CHILDREN WITH HIRSCHPRUNG DISEASE POST SOAVE PROCEDURE IN DR. SARDJITO HOSPITAL YOGYAKARTA

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**Background:** Hirschprung disease (HSCR) is the most common congenital motility disorder in children. This is characterized by the absence of ganglia in a variably distal gut that causing spastic and intestinal obstruction. Traditionally, the basic surgical principle for Hirschprung disease is to remove the aganglionic segment then having it pull-through to the normal colon. One of the most common pull-through method used is the Soave procedure. However, eventhough Soave proved to be efficient and safe, there are some preoperative factors that might influence the occurence of a poorer outcome (soiling and constipation) in the future.

**Objective:** The objectives in this research is to know the association between gender, age at operation, length of aganglionosis, and nutritional status to soiling and constipation post Soave procedure.

**Method:** This study was an observational study with cross-sectional design. The sample was collected from the medical record of patients with Hirschprung disease and undergone Soave procedure from March 2013 until December 2015.

aganglionosis, and nutritional status. Krickenbeck classification will be used to classify soiling and constipation. While the association between the preoperative factors to soiling and constipation will be measured using Fisher exact test.

**Results:** There were 25 HSCR patients following Soave procedure, consisted of males and females. The frequency of soiling post Soave procedure in Dr. Sardjito Hospital, Yogyakarta, was 2/25 (8%) and the constipation post Soave were 6/25 (24%). There were 23/25 (92%) males and 2/25 (8%) females. 14/25 (56%) patients were <3 years old during operation, while 11/25 (44%) were >3 years old. 23/25 (92%) were short segments and 2/25 (8%) were long segments. Poor nutritioned children during operation were 18/25 (72%) while the good nutritioned were 7/25 (28%). The Fisher exact shows a statistically insignificant p value for all the association between each of the prognostic factors to the outcome.

**Conclusion:** There was no association between gender, age at operation, length of aganglionosis, and nutritional status to the possible soiling and constipation outcome post Soave procedure in Dr. Sardjito Hospital Yogyakarta.

**Keywords:** Hirschsprung disease; functional outcome ; Soave procedur

## INTISARI

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**Latar Belakang :** Hirschprung adalah penyakit kongenital tersering yang terjadi pada anak. Penyakit ini dikarakteristikan dengan tidak adanya ganglia pada bagian intestinal sehingga menyebabkan spastik dan obstruksi pada intestinal. Pengobatan berupa operasi biasanya dilakukan dengan menghilangkan bagian aganglion tersebut lalu menyambungkannya dengan usus yang normal. Dalam beberapa metode penyambungan, metode Soave merupakan salah satu metode yang terbukti aman dan efisien. Meskipun begitu, ada beberapa faktor pre-operasi yang diduga dapat menyebabkan luaran buruk (soiling dan konstipasi) pada anak kedepannya.

**Objektif :** Untuk mengetahui apakah terdapat asosiasi antara jenis kelamin, usia saat operasi, panjang aganglion, dan status nutrisi saat operasi terhadap luaran soiling dan konstipasi setelah Soave procedure

**Metode :** Studi ini adalah studi observasional dengan metode cross sectional. Data yang diambil adalah data rekam medis pasien Hirschprung dan telah melalui operasi penyambungan Soave di Rumah Sakit Dr. Sardjito Yogyakarta dari Bulan Maret 2013-Desember 2015. Data faktor preoperasi yang diambil adalah jenis kelamin, usia saat operasi, panjang aganglion, dan status nutrisi. Klasifikasi Krickenbeck digunakan untuk mengklasifikasikan soiling dan konstipasi. Asosiasi antara faktor preoperasi dengan soiling dan konstipasi akan dihitung dengan tes Fisher's exact

**Hasil:** Didapatkan 25 sampel pasien Hirschprung dan melakukan prosedur Soave di Rumah Sakit Dr. Sardjito Yogyakarta. Frekuensi soiling yang didapat adalah 2/25 (8%) dan konstipasi sebanyak 6/25 (24%). Laki-laki berjumlah 23/25 (92%) dan 2/25 (8%) perempuan. Pasien yang melakukan operasi di usia dibawah 3 tahun sebanyak 14/25 (56%), sementara 11/25 (44%) diatas 3 tahun. 23/25 (92%)

adalah *short segment* dan 2/25 (8%) adalah *long segments*. Anak dengan status nutrisi buruk saat operasi sebanyak 18/25 (72%) sementara yang bergizi baik sebanyak 7/25 (28%). Tes Fisher exact menunjukkan nilai p yang tidak signifikan pada asosiasi antara faktor prognostik dengan luaran konstipasi dan soiling.

**Konklusi** : Tidak ada asosiasi antara jenis kelamin, usia saat operasi, panjang aganglion, dan status nutrisi dengan soiling dan konstipasi pada anak Hirschsprung setelah prosedur Soave di Rumah Sakit Dr. Sardjito Yogyakarta.

**Kata Kunci** : Penyakit Hirschsprung; luaran fungsional; prosedur Soave