# CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF PATIENTS WITH DELAYED CEREBRAL ISCHEMIA (DCI) AFTER ANEURYSMAL SUBARACHNOID HEMORRHAGE (SAH) IN A MULTIETHNIC POPULATION

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## INTRODUCTION

- SAH may be a devastating condition.
- DCI is defined as the occurrence of new focal deficits or a decrease in level of consciousness (LOC) that lasts for at least one hour.
- 30% of SAH patients develop DCI, leading to a worse prognosis.
- The clinical and epidemiological profile and treatment response of DCI patients are not well described in literature.

## MATERIAL AND METHODS:

•We evaluated consecutive patients admitted to a high volume center in Brazil who developed DCI after SAH in a 2 year period (from June 2016 to June 2018).

## RESULTS:

•21 patients developed 27 episodes of DCI

•A total of 85.7% of the patients were females.

•Their mean age was 50.41 years old (+/- 12.52).

•. The most common risk factors were hypertension (61.9%) and cigarette smoking (42.8%).

•76% had low clinical grade SAH – World Federation Scale of Neurological Surgeons (WFNS)1-3 but 81% had high grade radiological SAH – Modified Fisher Scale (mFS) 3-4 (figure 1).

•More than half of the patients (51,8%) had aneurysms in the anterior circulation and the prevalence of multiple aneurysms was 23.8%

•'DCI happened within 11.59 (+/-3.4) days after the bleeding

•DCI main manifestations were decreased LOC (70.4%), followed by hemiparesis (59.3%). In 22.2% it was only detected by transcranial Doppler (TCD) or CT perfusion (TCP) (figure 2)

•12 DCI episodes were treated with norepinephrine and 15 with milrinone

•NIHSS significantly dropped post treatment (13 to 9, p<0.01) (figure 3)

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•Therapy was maintained for 86.89 hours (+/-80.33). ) and vasospasm resolved in 17.48 (+/- 5) days after the bleeding.

•The mean time of ICU stay was 22 (+/- 9.31) days.

•A total of 44.4% and 62.5% of the patients had a modified Rankin scale <=2 at discharge and 3 months, respectively.

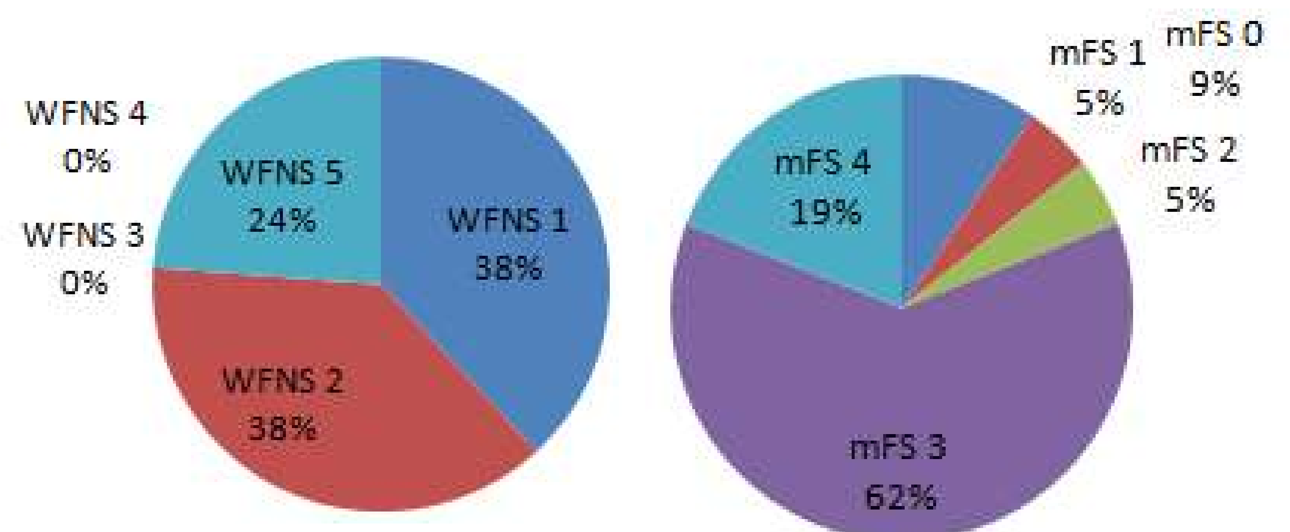


Figure 1 – Distribution of WFNS and mFS from DCI patients

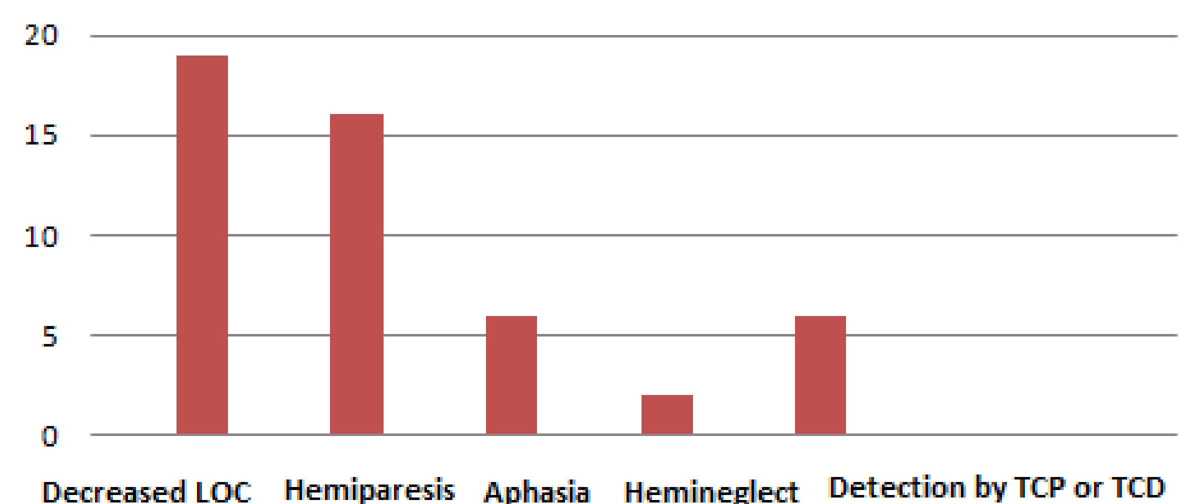


Figure 2 – DCI manifestations

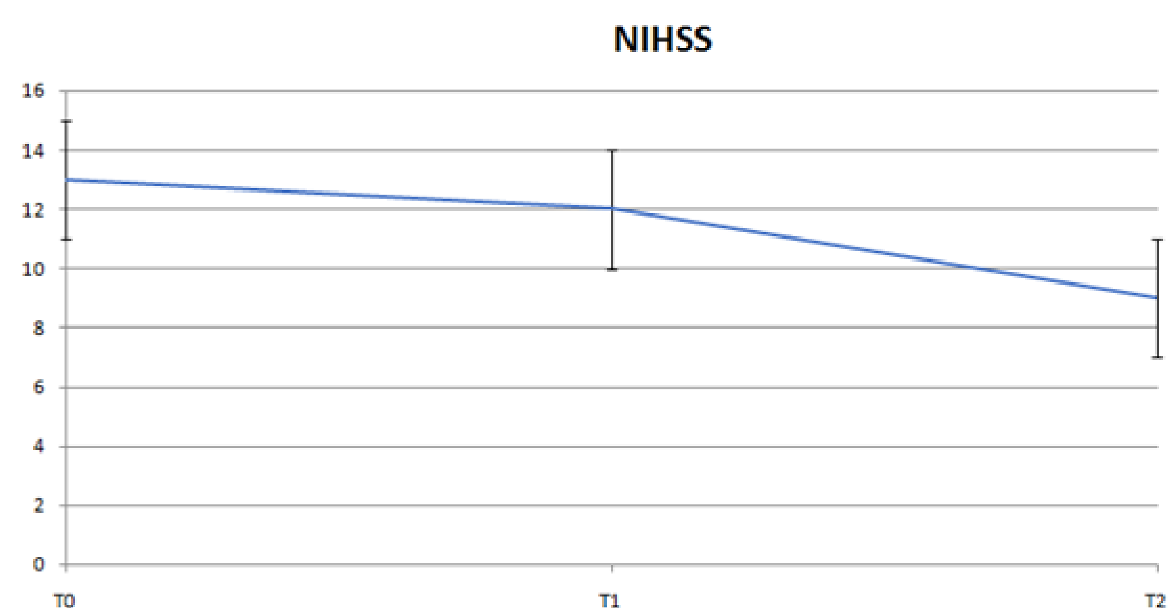


Figure 3- NIHSS significant drop with treatment (0<0.01)

## CONCLUSION:

•DCI symptoms responded to therapy in most of our patients and even those with high grade SAH can have a good functional outcome.

•Knowing the clinical profile of patients with DCI is of utmost importance for the design of new clinical trials