THE PERFORMANCE OF BASAL AND DDAVP STIMULATED ACTH BILATERAL SIMULTANEOUS INFERIOR PETROSAL SINUS SAMPLING (IPSS) FOR ACTH DEPENDENT SECRETING TUMOR DIAGNOSIS

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Bilateral IPSS for ACTH measurement has emerged as the most reliable mean of distinguishing pituitary (Cushing`s disease:CD) and nonpituitary ACTH-dependent Cushing's syndrome (Ectopic Cushing`s Syndrome :ECS). DDAVP has emerged as an alternative to CRH. To evaluate the use of DDAVP in IPSS test for ACTH-dependent Cushing's syndrome (CS) diagnosis we studied 36 patients with CS: 26 females and 10 males; 29 with CD and 7 with ECS). IPSS were performed by the same radiologist, with introduction of a femoral catheter in both inferior petrosal veins. ACTH was measured in inferior petrosal veins and in peripheral vein at the same time, before and 3, 5 and 10 minutes after IV administration of DDAVP 10 mcg. The criteria for a pituitary source were an inferior petrosal sinus to peripheral (IPS: P) basal ratio >=2:1, or an IPS: P ratio >=3:1 after DDAVP stimulation. Results: Inferior petrosal veins anatomical variability was present in 7 of 36 patients, preventing the IPSS realization in one case with CD. A basal ACTH IPS: P > 2.0 was observed in 26 patients with CD (90% sensitivity). Eight patients failed to obtain stimulated ACTH IPS: P > 3.0. One with CD failed to have basal and stimulated ACTH IPS: P gradient and other presented a stimulated ACTH IPS: P > 3.0. All patients with ECS the ACTH IPS: P were < 2.0 and < 3.0 at basal and stimulated tests, respectively. Three had an identified ACTH secreting tumor, whereas 4 of them had an occult ECS. C: in the present study, both tests had the same E and VPPof (100%). ACTH IPS:P > 2.0 determined with 90% of S and 77,7% NPV to CD diagnosis, whereas DDAVP stimulated ACTH IPS:P the S was 65,5% and NPV was 43,7% with a lower accuracy for the diagnosis approach.