

Lack of Knowledge of the Risks of Stroke in Women Using Hormonal Contraceptives

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Objective:

To identify women's understanding of their risk for Stroke when taking hormonal contraceptives.

Background:

Since the early 1960's, links between women's use of oral contraceptives and increased risk for stroke have been established. With 100 million women worldwide using oral contraceptives, education and ongoing clinical monitoring of women's use of oral contraceptive users is essential (Gillum and Johnston 2004). Generally risk-awareness originates from physician/nurse education during medical contact, package inserts and the popular media. The present study evaluated whether women who use oral contraceptives and suffered stroke had been educated on the risk due to oral contraceptives.

Methods:

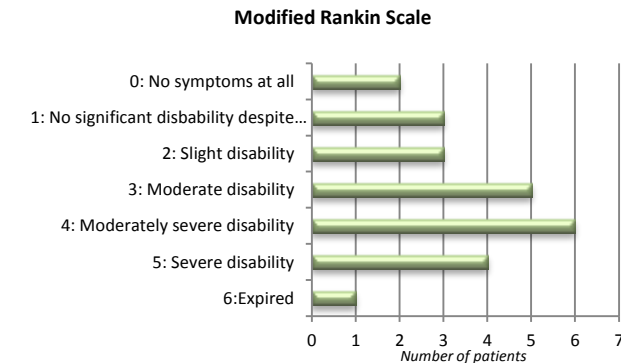
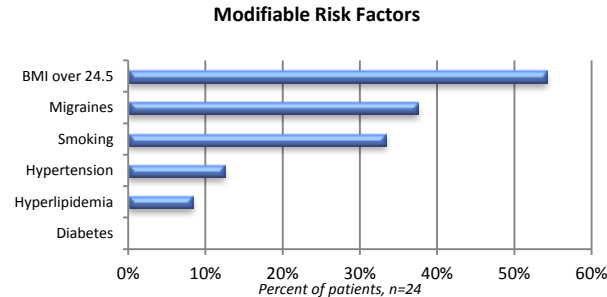
A retrospective chart review of twenty-four females with stroke aged 30-45 with a final primary diagnosis of ischemic or hemorrhagic stroke from 2008-2010. During post stroke education patients were interviewed concerning their experiences of warnings on the risk of stroke due to oral contraceptives. Each chart was reviewed for the correlation between the patient history of taking hormone components whether via oral contraceptives, IUD, or Depo-Provera and if the patients had experienced a stroke.

Results:

Significant findings include diagnosis, risk factors, patient origin, and disposition. The diagnosis included 50% (12/24) ischemic stroke and 50% (12/24) hemorrhagic stroke (subarachnoid or intracerebral). BMI 25 or higher was the most significant modifiable risk factor (54%), followed by smoking (33%) and hypertension (13%). Thirty-eight (38%) percent of the patient population were found to have history of migraines.

The majority (21%) of the patients came from Morris County. There was a moderate amount of people coming from Hunterdon, Sussex, Union, Bergen, Hudson, Monmouth and Somerset counties. (8-13%). There was a smaller (4%) population of females from Essex and Ocean counties.

The disposition of the patients varied from being able to go back to home independently (38%) to requiring acute rehabilitation (50%). A smaller group (8%) were sent home needing outpatient services, and 4% expired. Furthermore, a modified rankin score (mRS) was calculated at discharge and 25% of patients had a score of 4 indicating moderate to severe disability, 21% had a score of 3 indicating moderate disability. A smaller portion of the group (8%) had mRS of 0 however the percentage doubled (16%) with mRS of 5 indicating severe disability.



Conclusions:

Stroke education in young women has routinely focused on hypertension, diet and obesity, hypercholesterolemia, family history, irregular heartbeat, smoking and diabetes.

Another risk factor to consider is whether a woman who is thirty years or older and considering birth control pills should be tested for a hypercoagulable work up. Of the charts reviewed twenty-one percent (21%) were positive, forty-six percent (46%) were negative, while there were thirty-three percent (33%) that were not done.

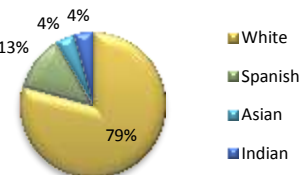
The lack of specific understanding of the increased risk of stroke related to women's use of oral contraceptives strongly indicates that better strategies to educate women at risk are needed. In our chart review it was found that there were four major counties that represented our total number of women who were at risk. Going forward, a targeted approach focusing on providing stroke risk education to Gynecology offices in the specific counties is being considered.

Being aware of the combination of risk factors, the need for potential hypercoagulable work up, and age association with hormonal contraceptives and stroke may facilitate better preventative care and reduce the incidence of stroke for women.

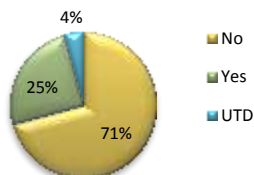
County of Origin	% of Patients
Morris	21%
Hunterdon	13%
Sussex	13%
Union	13%
Bergen	8%
Hudson	8%
Monmouth	8%
Somerset	8%
Essex	4%
Ocean	4%



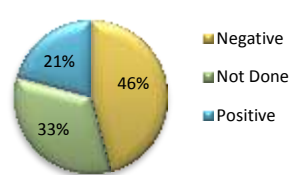
Non modifiable Risk Factor: Race



Non Modifiable Risk Factor: Family History



Hypercoagulable Workup



Discharge Disposition

