A pilot study of the efficacy of botulinum toxin type-A in primary focal palmar hyperhidrosis

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Introduction

Hyperhidrosis is sweating in excess of that required for normal thermoregulation. Causes can be divided into generalized and focal. Generalized hyperhidrosis involves the entire body. Common causes of generalized hyperhidrosis are infective, endocrine and neurological disorders. Primary focal hyperhidrosis is defined as excessive, bilateral and relatively symmetric sweating occurring in at least one of the following sites; the axillae, palms, soles or craniofacial region. Hyperhidrosis can be embarrassing and disabling, significantly impacting social and professional performance, and quality of life. Treatments aim to reduce sweating, but few are effective. Botulinum toxin is effective and a relatively new form of treatment in primary focal hyperhidrosis.

Aims;

1. To study the efficacy of botulinum toxin in primary palmar hiperhidrosis
2. To evaluate safety profile of botulinum toxin in this condition
3. To evaluate the usefulness of starch iodne test to map the hyperhidrotic areas.

Methods

All patients were briefed regarding the procedure and written consent was taken. Period of study was from July 2007 to January 2008. There were 7 adult patients, 3 females and 4 males. Secondary causes of hyperhidrosis were excluded clinically. All patients met with the criteria for diagnosis of primary focal palmar hyperhidrosis. Hyperhidrotic areas were detected by starch iodine test. In starch iodine test, palms were dried first, iodine was applied and allowed to dry. Starch was sprinkled on both palms and examined after 10 minutes. Hyperhidrotic areas gave a characteristic black color. Control starch iodine test was done in a normal patient at the same time. Points of injection were marked at 1.5 cm interval. A regional wrist block was given with the help of a consultant anaesthetist prior to the procedure. Each palm was injected with 50-75 units of botulinum toxin. Injections were given intradermlly about 2 mm depth at an angle of 45 degree. Patients were followed up at 1 week and monthly thereafter. Response was assessed by repeat starch iodine test and patient self assessment.

Hyperhidrotic hands

Positive starch iodine test

Negative starch iodine test at 1 month

Negative test at 5 month

Results

Within 7 days of treatment 4 patients had complete reduction of sweating. All 7 had complete reduction of sweating at 1 month. In 5 patients, sweating remained well controlled at 5 months. One patient developed mild weakness of hands at 1st week and it resolved completely by 3rd week. In starch iodine test, all clinically suspected tested positive for the test. After the patients responded the test became negative. All 7 controls were negative for starch iodine test. Patients were extremely satisfied about the treatment.

Discussion

4 out of 7 patients had significant reduction of sweating at 1st week. All 7 patients were satisfied at 1 month. Five patients remained well controlled at 5 months of treatment. One patient developed mild weakness (14%) of the hands which resolved completely in 3 weeks. This is a very high percentage compared to other studies. This could be due to the fact that our sample is very small.

Conclusion

Botulinum toxin type-A is an effective form of treatment for primary focal palmar hyperhidrosis. There are no major side effects. Repeated injections are required depending on the time taken for the effects of botulinum toxin to wane off. Starch iodine test is a sensitive method to diagnose primary focal palmar hyperhidrosis and to asses clinical response to botulinum toxin. However, botulinum toxin type-A is an expensive treatment option.

References

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