Surgery for Facial Blushing:
The importance of preoperative psychiatric consultation and selection process

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Controversies
Why we have differences results in Facial Blushing- Hyperhidrosis?*

* Smidfelt and Drott 75% vs 95.6% satisfaction. Br J Surg 2011

1.-Surgical indications: Selection of patients
   We know if HH is severe, failed medical treatments, but,
   How to know the severity of FB? What is the medical treatment?

2.-Level of sympathetic surgery
   Palmar HH requires ETS T3 (R3 or R3-4) ---- FB requires ETS T2 (R2 or R2-3)

3.-Compensatory sweating
   Bigger in T2 than T3, 98.9% CS.

4.-Cardiovascular side effects
   Bradicardia is the most important. We use atropine always.
Our Conditions for ETS for **FACIAL BLUSHING**

- Facial Blushing degree 3-4 (0-4)
- Social Phobia (Tests)
- Psychiatric Evaluation
- Previous SIRS treatment (50% effectiveness)
- BMI 20-22 max (< CS)
- No hot residence place
- Capacity to understand bad results (compensatory sweating, persistent blushing, arlequin syndrome)
1.- Indications of ETS

ALWAYS After ISRS (Sertraline) Therapy
2.- Level and Type of ETS

ETS T2 = R2-R3 = G2

Cutting or Clipping have same results
No discussion now
R2-3 and R2 are equal (Licht 2012)
Prospective and randomized trial
Evaluate Satisfaction and Compensatory sweating
No differences
2.-ETS - Surgical Technique

General anesthesia
Two ports 5mm
Video camera 4mm, 30°
Ultrasonic scalpel
Cutaneous thermometer
Heart frequency
monitorization op/post op
Surgical Selection & Satisfaction:
We decided a prospective, observational, open label clinical study comparing ETS vs Sertraline vs No treatment.
Psychiatric Considerations

1903 Pierre Janet include eritrophobe between social phobias

General Social Anxiety Disorder (GSAD) is frequently associated with Blushing

50% patients with GSAD suffer Blushing. Amies et al, 1983
First publication about ETS in FB:
Wittmoser R Treatment of sweting and blushing by endoscopic surgery. 
Acta Neurochir (Wien)1985;74:153-4

First publication on sistematic study of ETS in Blushing:
Drott et al. Succesful treatment of facial blushing by endoscopic transthotacic sympaticotomy. Included 244 patients 

Since then, many publications, but none with control group
Previous Publications (2)

   Diagnosis by DSM-IV. Confirmed by Brief Social Phobia Scale (BSPS)
   51p, 88% satisfied

   N 219, 85% satisfied, 2% regretted

   N 1700, 75% satisfaction in long follow up; regret rate 13.5%

   100 p, randomized R2 vs R2-3, response rate 93%, mild recurrence 30% in one year, CS 93%, regret rate 13%, 85% excellent or satisfactory
Inclusion Criteria

1. Patients referred to psychiatrist (E.J.) from thoracic surgeon (C.S.) for FB
2. Patients consulting psychiatrist (E.J.) for FB
3. We include all consecutive patients consulting between August 2003 and November 2009.

Exclusion Criteria

1. Depression or another psychiatric disease on treatment.
2. Flushing, not Blushing (triggered by alcohol, physical exercise, warm).
Procedure

1. Psychiatric Interview, 50 mins

2. Previously they answer:
   - Brief Social Phobia Scale *(BSPS)* : 20 points or more
     and qualified their Facial Blushing in severe (3) or extreme (4)
     *(BSPS 0-72, Dg phobia 10-12 / Blushing 0-4)*
   - Social Phobia Inventory **(SPIN)** : 19 points or more
     **(SPIN 0-68, Dg phobia 12)**

3. In this schedule, the psychiatrist explain the therapeutical options: Psycotherapy, Sertraline (Medication), ETS (Surgery), and their consequences.
4. The patients send us an e-mail with the chosen treatment few days after the first interview

5. After 6-12 months we contact patients an re-evaluate with the same 4 TAS questionnaires

6. We considered for analysis only:
   - Patients with Facial Blushing level 2, 3 and 4 in BSPS
   + diag. GSAD in BSPS (≥ 20 points)
   + diag. GSAD in SPIN (≥ 19 points)
   + diag. GSAD with DSM-IV (Diagnostical and Statistical Manual of Mental Disorders, Fourth Edition)
   - Patients underwent T2 or T2-T3 sympathectomy
88 excluded
Data on treatment no available 29
Other drugs prescribed 20
Not T2 or T2-3 ETS 12
Refused participate 10
Already on antidepressants 9
Depressive symptoms 4
Flushing 3
Blushing in neck and chest only 1

330 Blushers

242 Blushers

220 Blushers + GSAD

ETS

Sertraline

No treatment

Baseline Assessment

Follow Up

105

101

14

101

98

14

22 patients
Did not fulfil criteria for GSAD
Baseline sociodemographic characteristics in GSAD patients with Blushing complaints

<table>
<thead>
<tr>
<th>Características</th>
<th>ETS N = 105</th>
<th>Sertraline N = 101</th>
<th>No treatment N = 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>13 — 60</td>
<td>30 (8,4)</td>
<td>30 (8,8)</td>
</tr>
<tr>
<td>Gender</td>
<td>% male</td>
<td>63 (60%)</td>
<td>26 (26%)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>67 (64%)</td>
<td>54 (53%)</td>
<td>5 (36%)</td>
</tr>
<tr>
<td>Married</td>
<td>31 (30%)</td>
<td>40 (40%)</td>
<td>8 (57%)</td>
</tr>
<tr>
<td>Widow</td>
<td>1 (1%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Divorced</td>
<td>6 (5%)</td>
<td>7 (7%)</td>
<td>1 (7%)</td>
</tr>
<tr>
<td>Education level/occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>-</td>
<td>1 (1%)</td>
<td>-</td>
</tr>
<tr>
<td>Secondary</td>
<td>19 (18%)</td>
<td>14 (14%)</td>
<td>2 (14%)</td>
</tr>
<tr>
<td>Technical</td>
<td>25 (24%)</td>
<td>22 (22%)</td>
<td>2 (14%)</td>
</tr>
<tr>
<td>Universitary</td>
<td>58 (55%)</td>
<td>62 (61%)</td>
<td>10 (71%)</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>1 (1%)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Housewife</td>
<td>1 (1%)</td>
<td>1 (1%)</td>
<td>-</td>
</tr>
<tr>
<td>Others (artisans, merchants, etc)</td>
<td>-</td>
<td>1 (1%)</td>
<td>-</td>
</tr>
</tbody>
</table>
Frequency of **severe or extreme blushing** (score 3-4) according the Brief Scale of Social Phobia (0-1-2-3-4)

<table>
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<tr>
<th>Type of treatment</th>
<th>Pre-trat.</th>
<th>Post-trat.</th>
</tr>
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<tbody>
<tr>
<td>STE</td>
<td>97%</td>
<td>16%</td>
</tr>
<tr>
<td>Sertralina</td>
<td>87%</td>
<td>32%</td>
</tr>
<tr>
<td>Sin Tratamiento</td>
<td>79%</td>
<td>57%</td>
</tr>
</tbody>
</table>

(n = 101) (n = 98) (n = 14)

Follow-up: 11 months (range 1-59 months)
Change in Intensity of Blushing accord to BSPS (0-4)
Change in Total Score in BSPS

-20  -15  -10  -5  0  5  10  15  20

Sin tratamiento

STE

Sertralina
Change in SPIN

- Sin tratamiento
- STE
- Sertralina
Compensatory Sweating in ETS patients (98.8%)
Degree of satisfaction with ETS or Sertraline (n =193)
Results: Satisfied and very satisfied with different treatments

- STE: 89% (N = 97)
- Sertralina: 59% (N = 96)
Final results

**ETS:**
89% satisfaction in FB and GSAD (p 0.003 vs no treatment group),
2% regret rate
99% CS (12% severe)

Smidfelt K, Drott C. 75% satisfaction, regret rate 13.5%, CS 80%
Licht PB, Pilegaard HK, Ladegaard L. 85% satisfaction, regret rate 13%, CS 93%

**Sertraline:** 59% satisfaction, but no regret

**No treatment** No satisfaction
After those results:
When to Recomend ETS for **FACIAL BLUSHING**
Total ETS patients 1498, Total ETS in FB patients 330

- Facial Blushing degree 3-4 (severe or extreme)
- Social Phobia (BSPS >20 · SPIN>19)
- Psychiatric Evaluation (to discard another mental disease)
- Previous SIRS (Sertraline 50 mg/day at least 3 months)
- BMI 20-22 max (overweigth and obeses have more CS)

- Importance of residence place (cold better than hot)
- Capacity of understood bad results (compensatory sweating, persistent blushing, arlequin sindrome)