

# UTERINE AND PROSTATIC ARTERY EMBOLIZATION UNDER ACUPUNCTURE FOR UTERINE FIBROIDS AND BENIGN PROSTATIC HYPERPLASIA

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# PAIN RELATED TO UAE

- ★ UFE IS USUALLY PAINFUL.

- ★ THERE ARE SEVERAL PROTOCOLS TO CONTROL PAIN.

- ★ MOST PROTOCOLS USE EPIDURAL ANESTHESIA SEVERAL DRUGS OR EVEN MORPHINE PUMP.



# ACUPUNCTURE ANALGESIA

## ELECTROACUPUNCTURE

- ★ 1960 – TO SUPPRESS THE PAIN INDUCED BY SURGERY

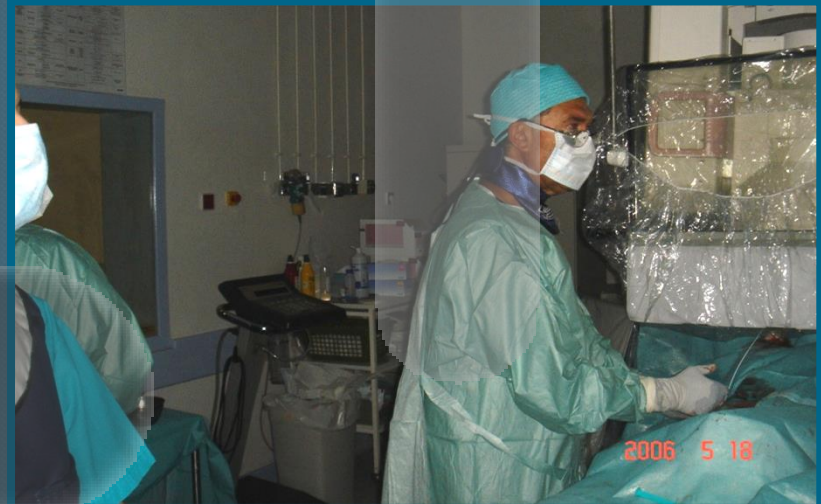
- ★ TO INDUCE ANALGESIA – LOW FREQUENCY, HIGH INTENSITY STIMULATION FOR AT LEAST 20 MN

- ★ TRADITIONAL CHINESE ACUPUNCTURE POINTS – STOMACH 36, SPLEEN 6



# MAY 19, 2006

## 1<sup>ST</sup> UFE UNDER ACUPUNCTURE





# PURPOSE

★ TO EVALUATE WHETHER  
ELECTROACUPUNCTURE CAN BE A  
SAFE AND EFFECTIVE ALTERNATIVE  
TO CONVENTIONAL ANALGESIA ON  
UTERINE FIBROIDS EMBOLIZATION  
AND BENIGN PROSTATIC  
HYPERPLASIA



# MATERIAL

- ★ 70 CONSECUTIVE PATIENTS UNDERWENT UAE (MEAN AGE 39.5Y)

- ★ 2 NON RANDOMIZED GROUPS:

- . A – 33 PATIENTS CHOSE ACUPUNCTURE

- . B – 37 PATIENTS CHOSE LOCAL ANESTHESIA



# BASELINE DATA OF CLINICAL PRESENTATION

	MEAN AGE	MENORR HAGIA	BULK SYMPTOMS	PAIN
GROUP A (N°=33)	37.5	19 (57.6%)	9 (27.3%)	5 (15.2%)
GROUP B (N°=37)	41.4	23 (62.2%)	10 (27.2%)	4 (10.8%)
p	0.015			



# BASELINE DATA OF UTERUS AND DOMINANT FIBROID

	UTERUS VOLUME	DOMINANT FIBROID VOLUME	LOCALIZATION OF FIBROID		
			SS	IM	SM
GROUP A	540	210	4	23	6
GROUP B	445	134	2	7	8

$p = 0.40$

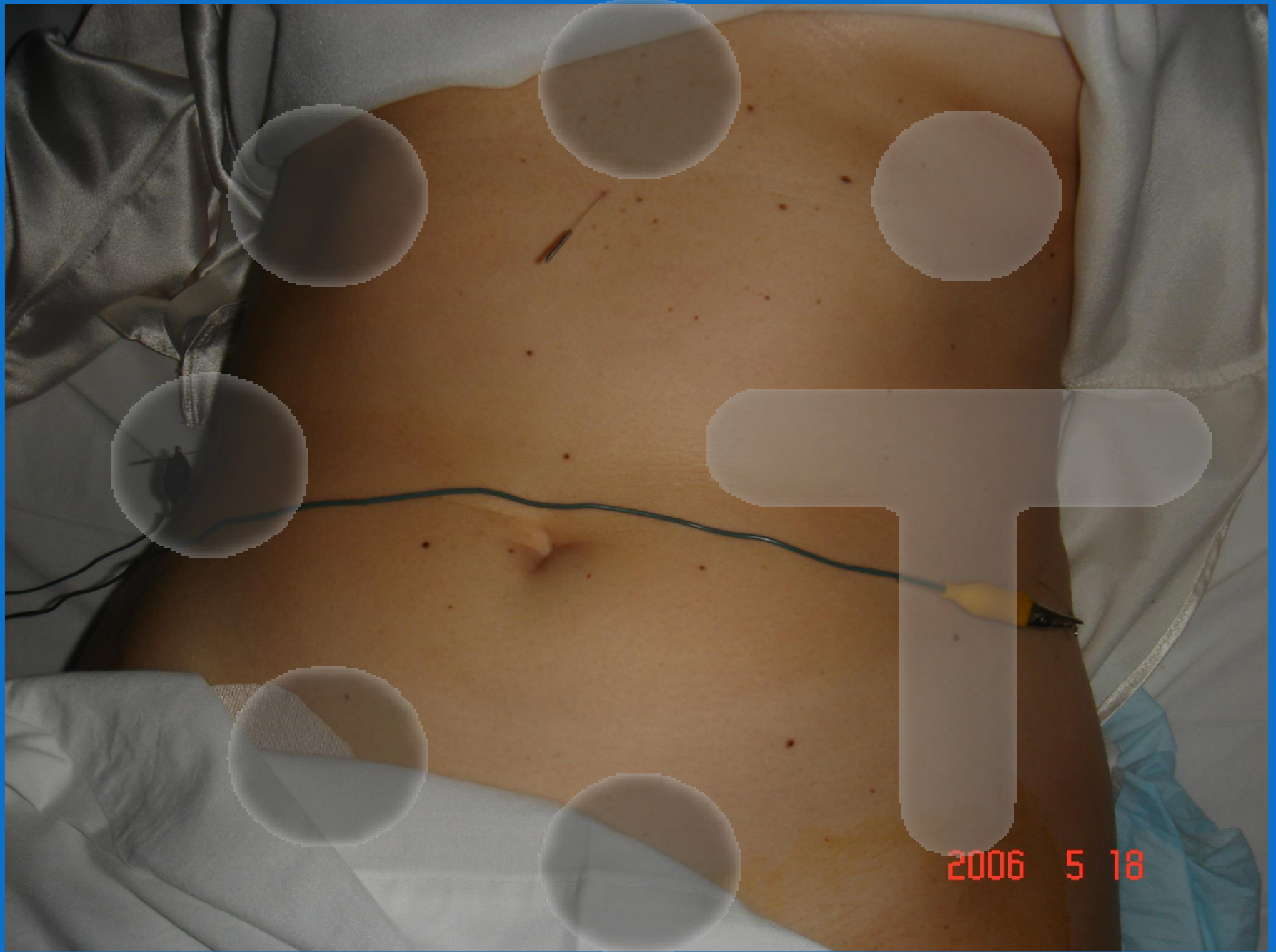


# PRE EMBOLIZATION MEDICATION

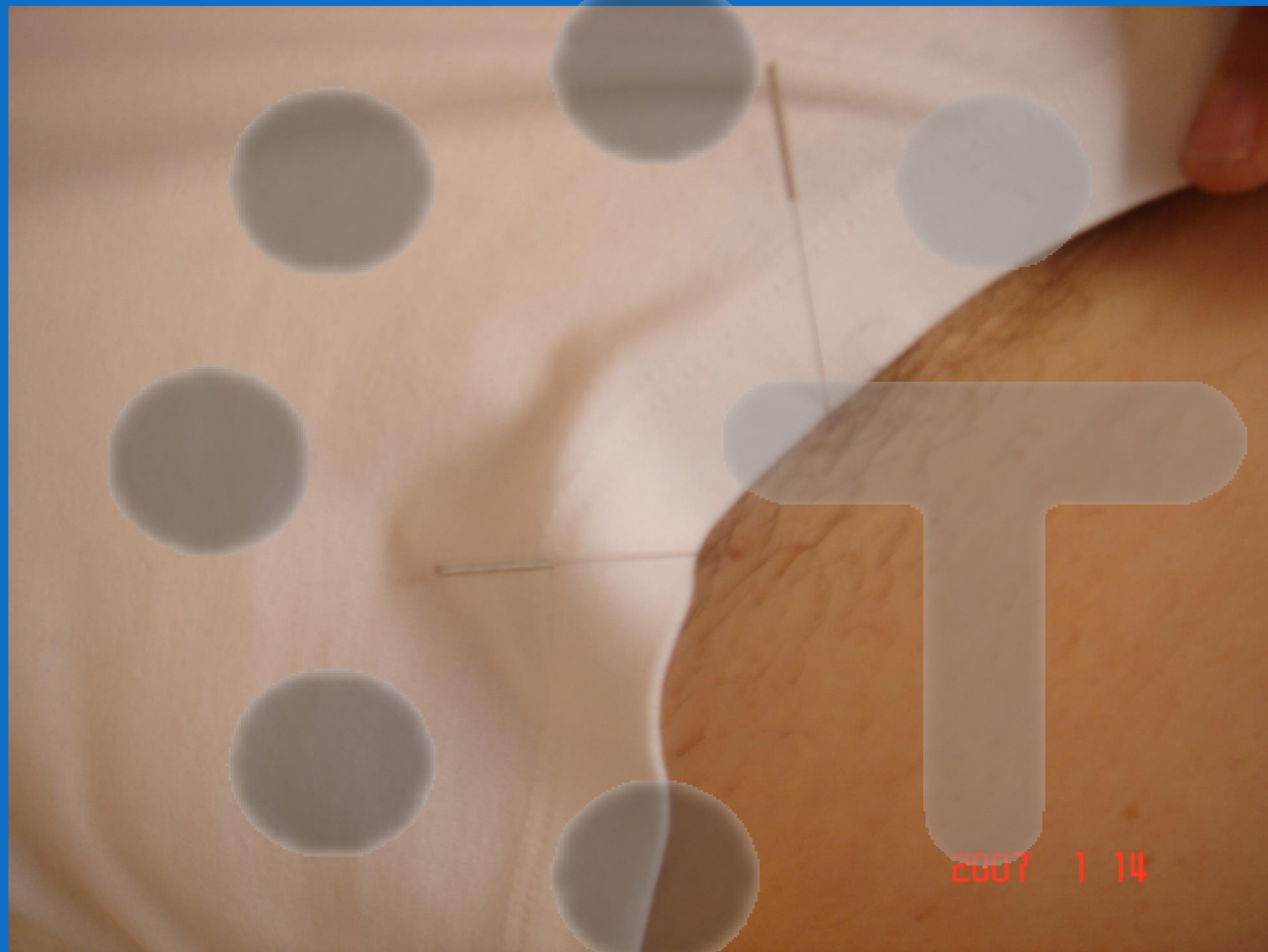
## JUST BEFORE EMBOLIZATION

	TYPE OF ANESTHESIA	
	ACUPUNCTURE	LOCAL
MEDICATION	DIAZEPAN 10 mg sub lingual  PIROXICAN 20 mg i.v.	DIAZEPAN 10 mg sub lingual PIROXICAN 20 mg i.v. OMEPRAZOLE 20 mg i.v. METAMIZOL 2 g i.v. TRAMADOL 100 mg i.v. PROCHLOPERAMIDE 20 mg i.v.

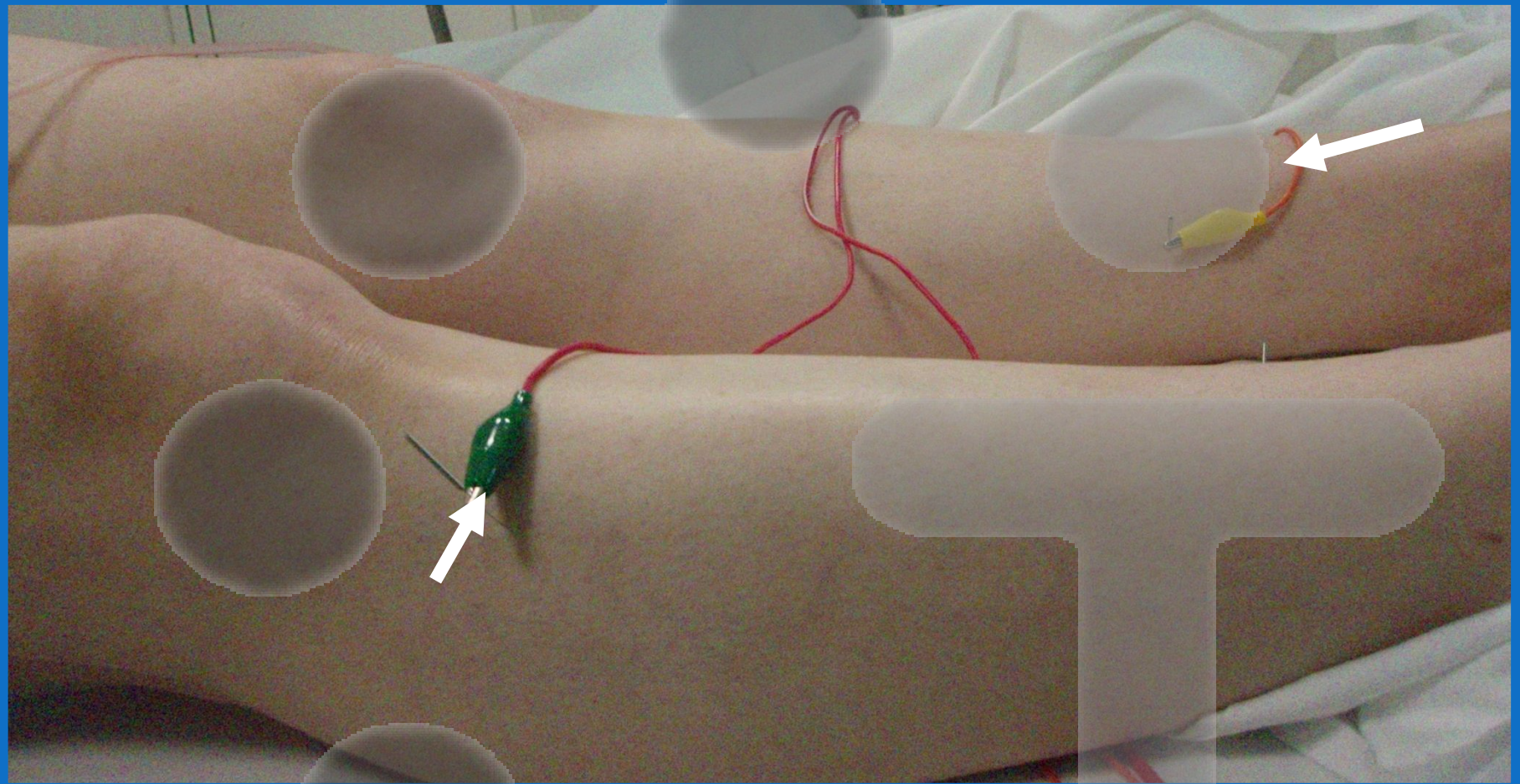








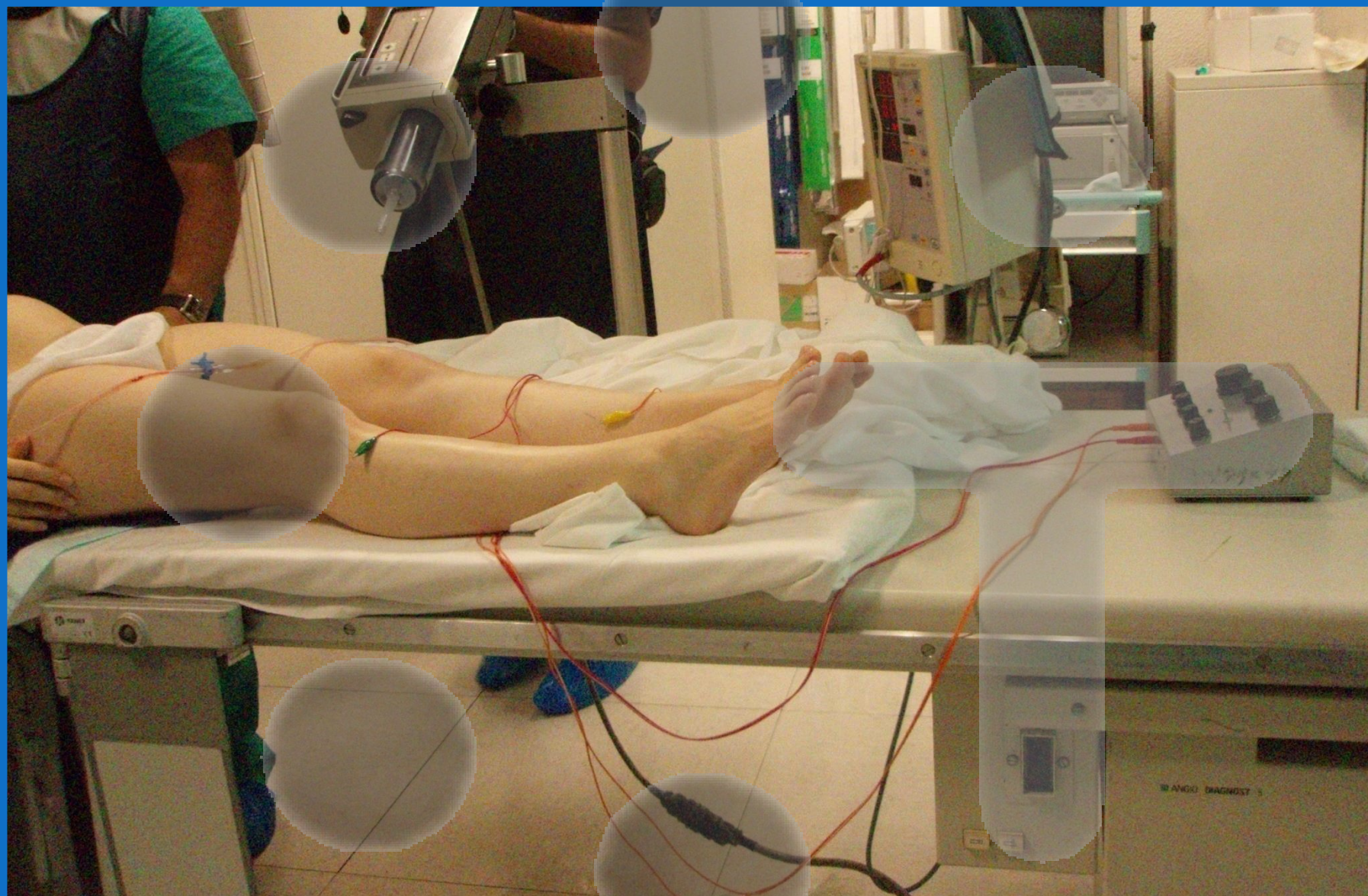




→ ST 36 POINT

→ SP 6 POINT (THE MOST IMPORTANT POINTS FOR ANESTHESIA )







# ACUPUNCTURE - ANALGESIA

★ PROCEDURE WAS STARTED 20 – 30 mm AFTER PLACEMENT OF THE NEEDLES.

★ ACUPUNCTURE FOR 30 MN AFTER UAE



# MEDICATION DURING EMBOLIZATION

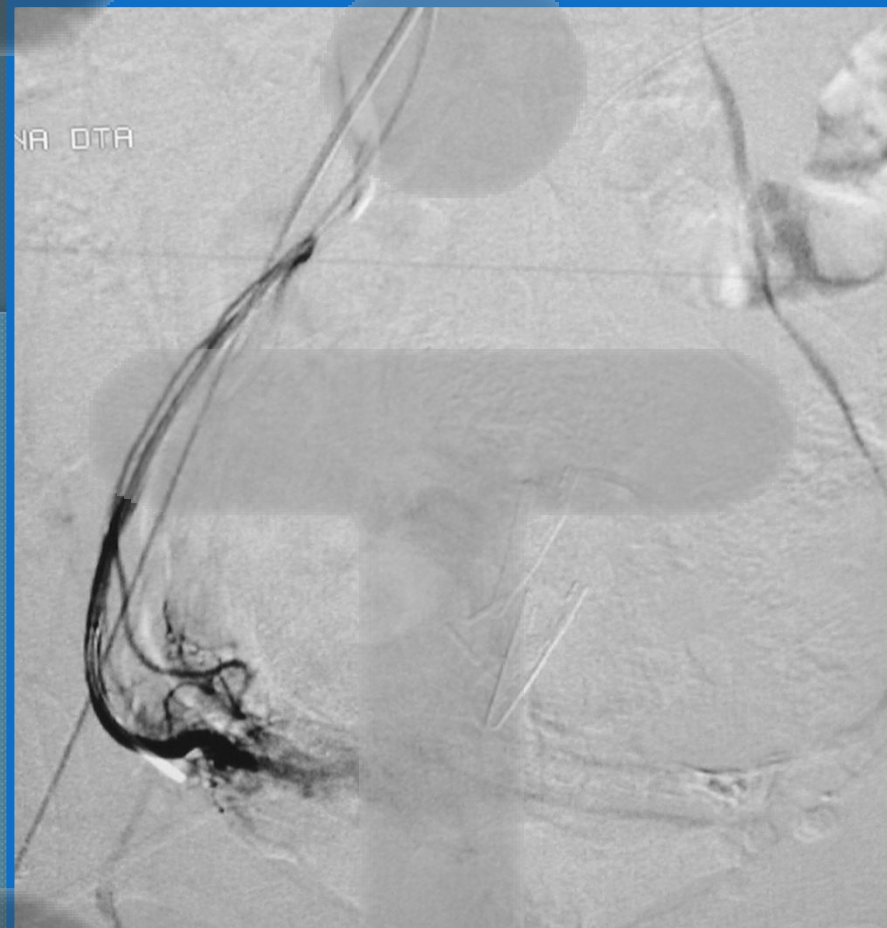
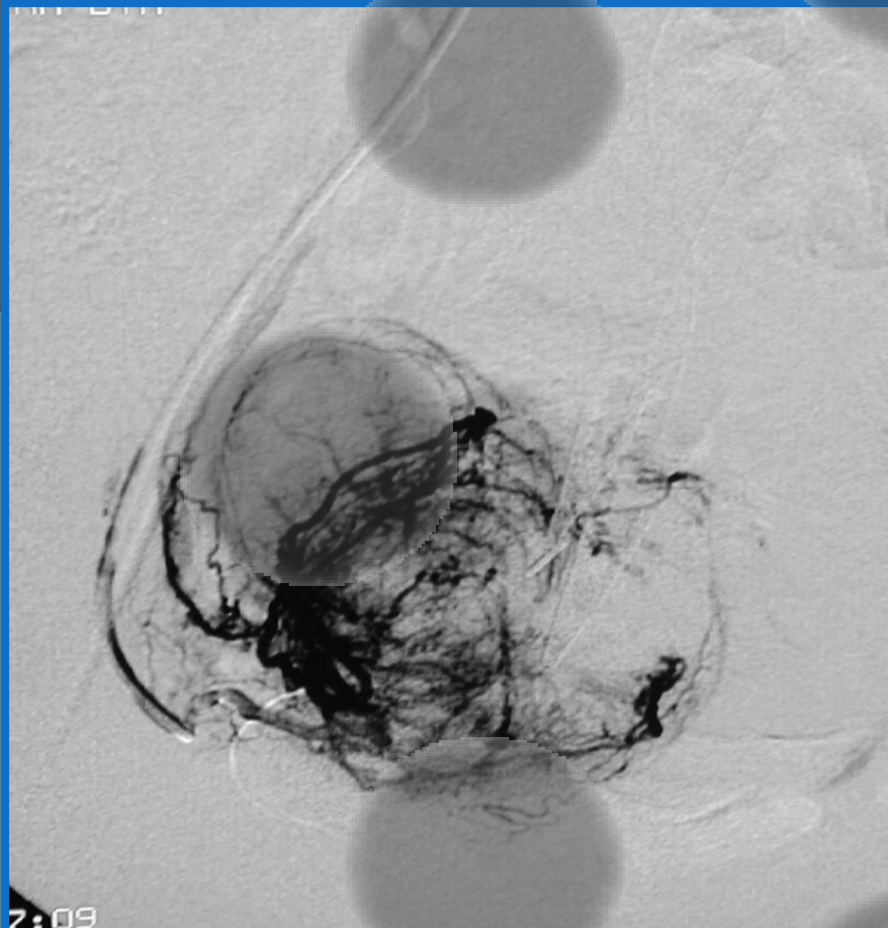
	TYPE OF ANESTHESIA	
	ACUPUNCTURE	LOCAL
MEDICATION	MIDAZOLAN (SOS) 0.5 mg	KETOROLAC TROMETAMINE 30 mg i.v. 2X  MIDAZOLAN (SOS) 0.5 mg



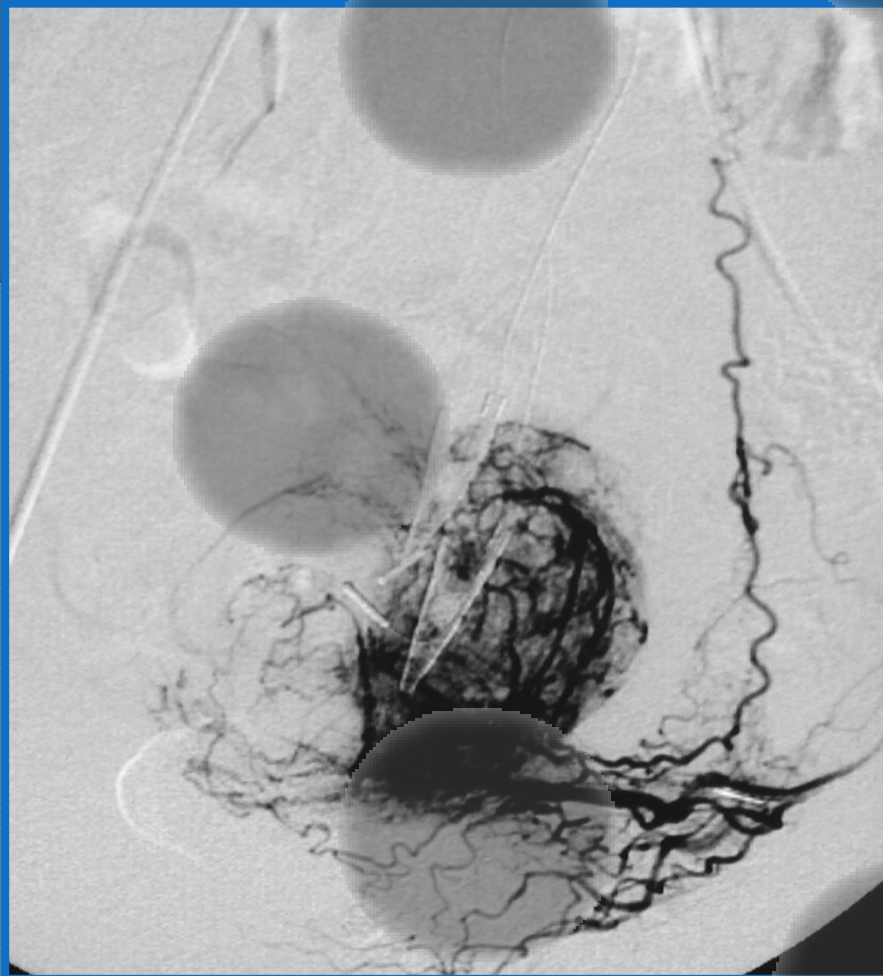
# METHODS - UFE

- ★ SINGLE FEMORAL APPROACH
- ★ BOTH UTERINE ARTERIES EMBOLIZED
- ★ PVA PARTICLES + KETOPROFEN 100 mg

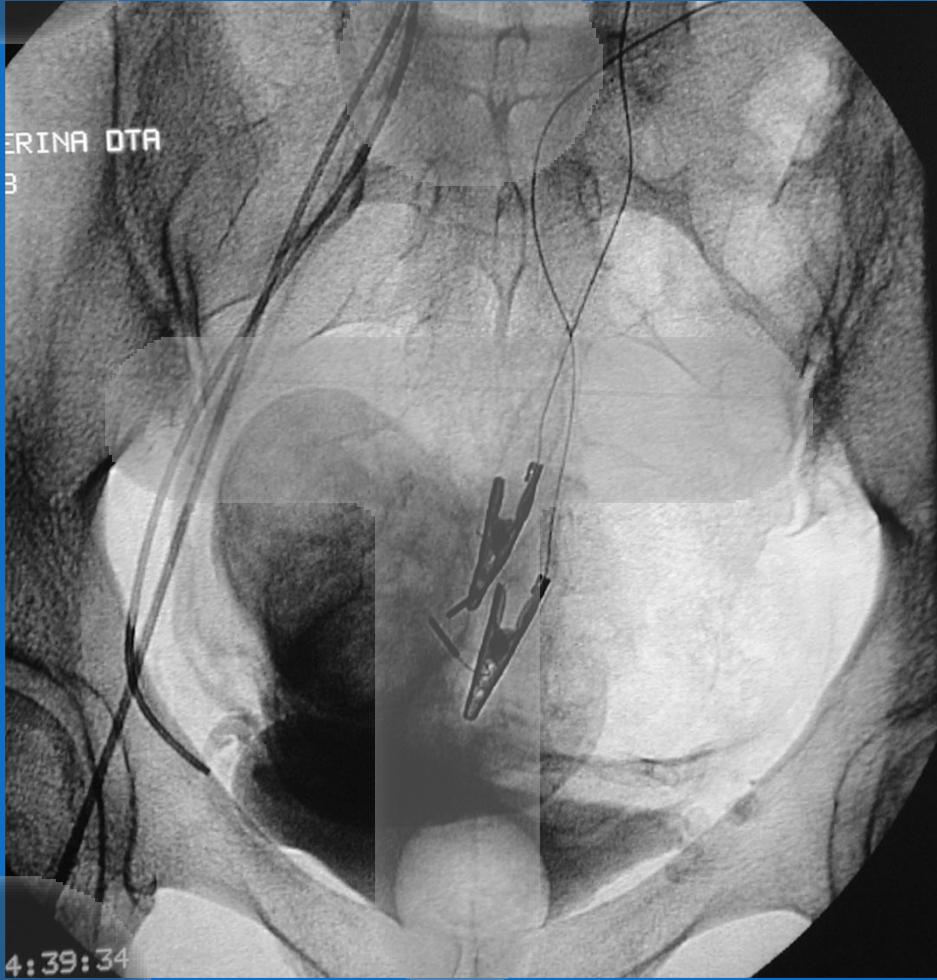




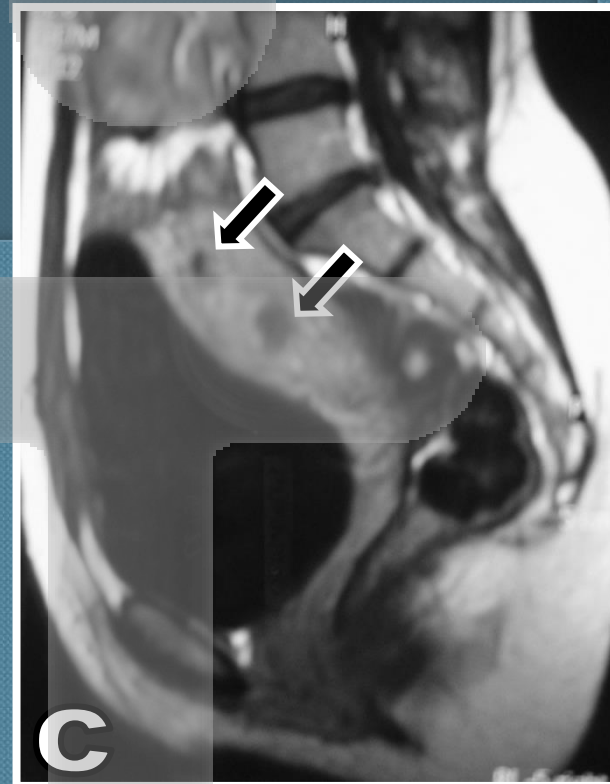




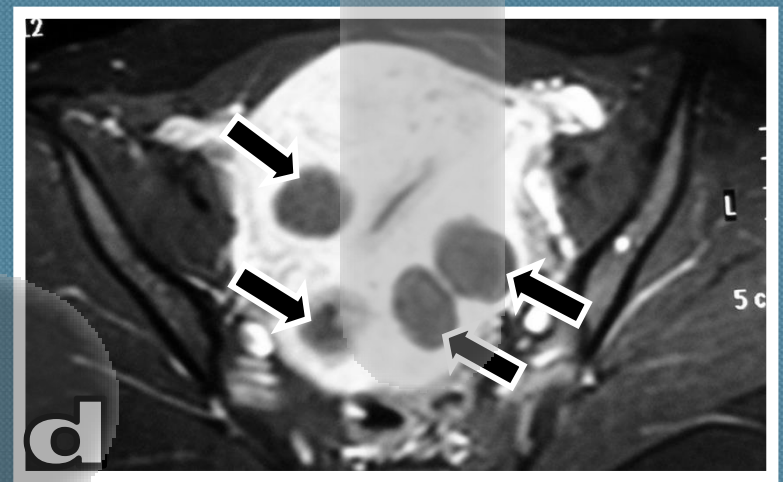
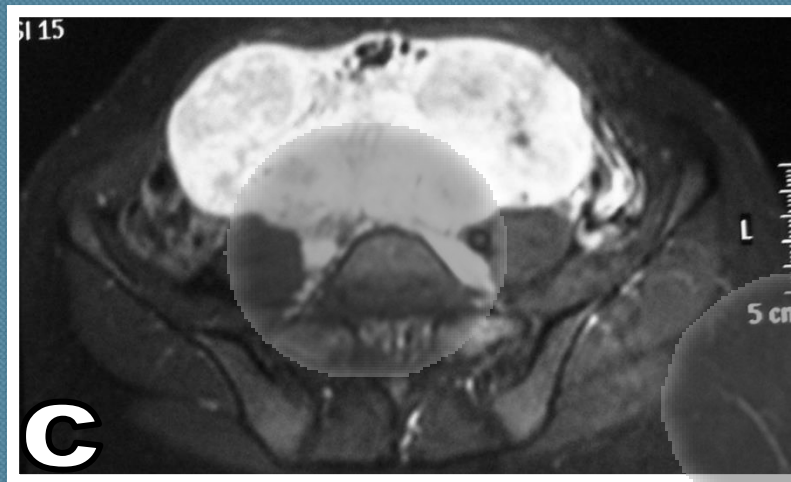
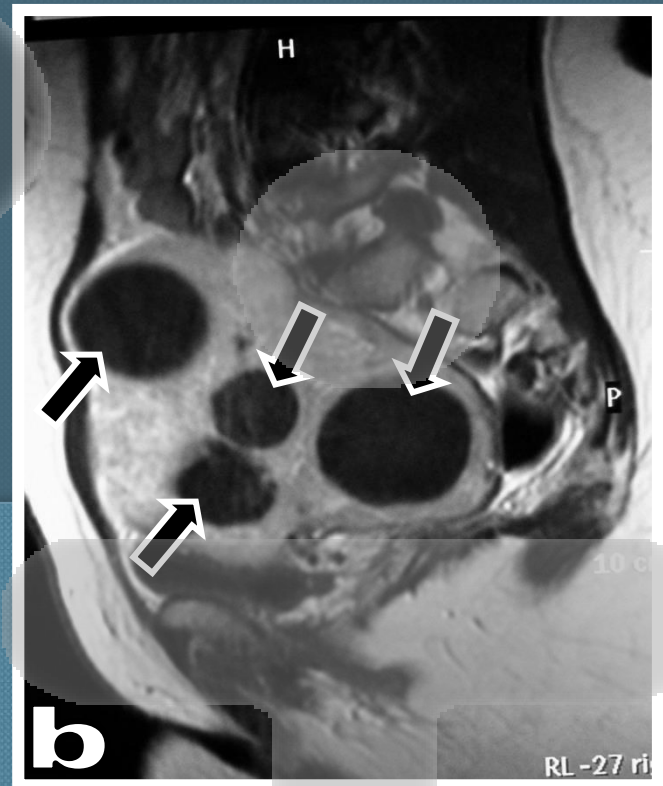












**GROUP B1**



# **DEGREE OF PAIN (SCALE NUMERIC PAIN)**

**0 – NO PAIN**

**1 - 2 – LIGHT PAIN**

**3 - 5 – MODERATE PAIN**

**6 - 7 – SEVERE PAIN**

**10 – VERY SEVERE PAIN**

**★ DURING UAE**

**★ AFTER UAE**

**★ DISCHARGE**

**★ NEXT MORNING**



# PAIN SCORE DURING UFE

TYPE OF ANESTHESIA	DREGRE OF PAIN				
	0	1-2	3-5	6-7	MEAN
ACUPUNCTURE	25	8	0	0	0.36
LOCAL ANESTHESIA	23	10	4	0	0.84

$p = 0.11$



# PAIN SCORE AFTER UFE AND BEFORE DISCHARGE

TYPE OF ANESTHESIA	DREGRE OF PAIN					
	0	1-2	3-5	6-7	8-10	MEAN
ACUPUNCTURE	8	5	16	2	2	2.80
LOCAL ANESTHESIA	4	5	9	6	13	3.97

$p = 0.02$



# PAIN SCORE AT DISCHARGE

TYPE OF ANESTHESIA	DREGRE OF PAIN				
	0 (%)	1-2 (%)	3-5 (%)	6-7 (%)	MEAN
ACUPUNCTURE	13 (39.4)	19 (57.6)	1 (3.0)	0	0.99
LOCAL ANESTHESIA	3 (8.1)	28 (75.7)	4 (10.8)	2 (5.0)	1.64

$p = 0.0001$



# PAIN SCORE NEXT MORNING TO UFE

TYPE OF ANESTHESIA	DREGRE OF PAIN			
	0 (%)	1-2	3-5	MEAN
ACUPUNCTURE	13 (39.4)	18	2	1.06
LOCAL ANESTHESIA	12 (32.4)	23	2	1.15

$p = 0.27$



# RECOVERY

	GROUP A 33	GROUP B 37
HOURS BEFORE DISCHARGE	6.5	7.4
OVERNIGHT	1	1
DAYS BEFORE WORK	5.4	8.1



# PATIENT SATISFACTION TIME OF DISCHARGE

★ GROUP A – 100%

★ GROUP B – 98.3%

(SEVERE PAIN - READMITTED)



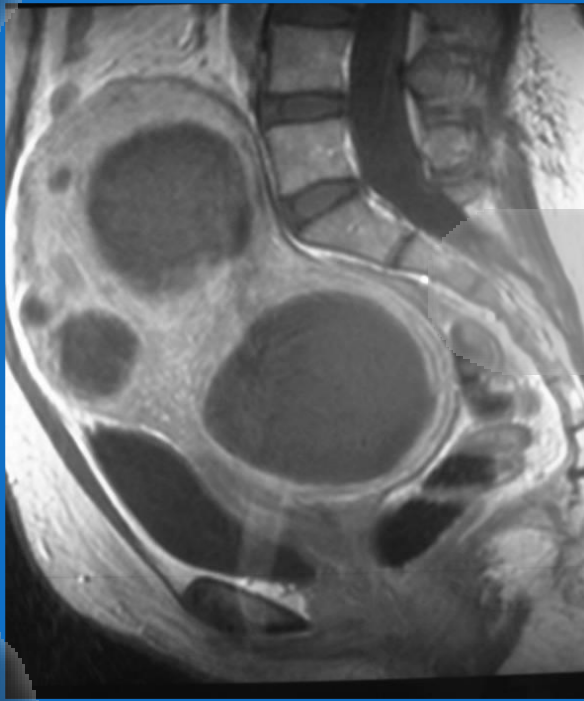
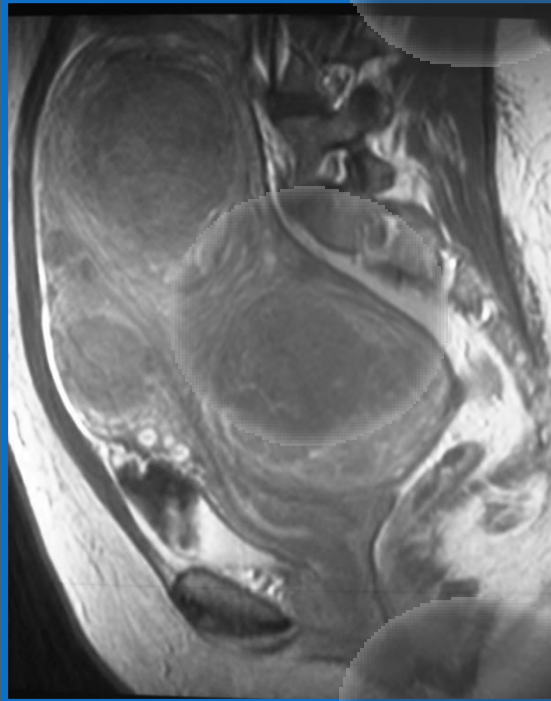
# UTERUS AND DOMINANT FIBROID VOLUME AT 6 MONTHS AFTER UAE

	UTERUS		DOMINANT FIBROID	
	BEFORE UAE	AFTER UAE	BEFORE UAE	AFTER UAE
GROUP A	540	282	210	61
GROUP B	445	262	134	68

$p = 0.35$

$p = 0.45$





**GROUP A**





**GROUP B**



# **UAE – UNDER ACUPUNCTURE**

## **ADVANTAGES**

- ★ FEWER MEDICATIONS

- ★ FEWER POST EMBOLIZATION SYMPTOMS

- ★ FEWER HOSPITALIZATION HOURS

- ★ FASTER RECOVERY







# Quando as agulhas fazem de anestesia

■ No Hospital St. Louis, Lisboa, as pacientes podem optar pela acupunctura. Desde 2006 que o médico Martins Pisco opera assim as suas doentes

● RUTE ARAÚJO TEXTOS  
BRUNO COLAÇO FOTOS

**A**s mãos de Mitsuharu Tsuchiya percorrem as pernas até encontrarem o local exacto para espetar a agulha. Depois, seguem o mapa do corpo, sobem ao abdómen e voltam a perfurar a pele. Bastam apenas quatro agulhas, ligadas durante 20 minutos a um aparelho de corrente eléctrica, para que o mestre em acupunctura obtenha o efeito desejado: a paciente deixa de sentir da cintura para baixo. O adormecimento dos membros dura uma hora. É o tempo suficiente para que, dentro do bloco operatório, o radiologista Martins

Pisco leve a cabo a sua operação. Sem anestésistas.

No Hospital de St. Louis, em Lisboa, as doentes podem escolher substituir a anestesia local pela acupunctura. É o único local do Mundo onde o tratamento para os miomas do útero, através da embolização, é conjugado com a técnica alternativa. Desde 2006, 53 pessoas já optaram pelas agulhas.

**Em dois anos  
houve 53  
mulheres  
a optar pelas  
agulhas**

Mitsuharu Tsuchiya é japonês e anestésista de formação, mas há décadas que pôs de lado o recurso a medicamentos. Em Portugal há 35 anos, fazia tratamentos de acupunctura nas suas clínicas. Até que o médico Martins Pisco o convidou para trabalhar consigo. “A primeira doente



Quatro  
agulhas  
são co-  
locadas

foi uma técnica que trabalhava com ele. Perguntou-me se podia usar a acupunctura. Eu já o conhecia há muito anos e aceitei. Os resultados foram óptimos”, conta o médico. Com esta técnica, não há remédios

para as dores antes da operação. O único problema é quando a operação se prolonga por mais de uma hora. Casos raros para Martins Pisco, que costuma terminar as suas intervenções em 25 minutos. ■





Quatro  
agulhas  
são co-  
locadas



# Diário de Notícias

Hospital anestesia com  
acupuntura







- **Anestesia feita por Acupuncutores**





# CONCLUSION

- ★ ELECTROACUPUNCTURE IS A SAFE AND EFFECTIVE ALTERNATIVE TO CONVENTIONAL ANALGESIA ON UFE
- ★ LOWER DEGREE OF POST EMBOLIZATION PAIN IN PATIENTS UNDER ELECTROACUPUNCTURE
- ★ THERE ARE NO DIFFERENCES OF THE OUTCOMES OF UFE AT 6 MONTHS
- ★ RANDOMIZED TRIAL NEEDED BEFORE DEFINITIVE CONCLUSIONS, BUT DIFICULT.





# Rational

- ❖ Severe Complications After Medical or Surgical by for PAE (Sexual Dysfunction)
- ❖ Such Complications in Friends of mine and my own family
- ❖ Success of PAE in DeMerrit and Experimental Cases
- ❖ Similarity to UFE (Good Results)
- ❖ Local Anesthesia
- ❖ Outpatient Procedure



SOCIETY OF  
INTERVENTIONAL  
RADIOLOGY

*Enhanced care through advanced technology®*

# PROSTATE TREATMENT LASTS, PRESERVES FERTILITY



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**LUCIA FERNANDES**  
**JOSÉ PEREIRA**  
**MARISA DUARTE**






# **PROSTATIC ARTERY EMBOLIZATION (PAE)**

- 1. ENLARGED PROSTATE AFFECTS > 50% MEN  
OLDER THAN 60 YEARS**
  - 2. PAE SHRINKING THE PROSTATE WITHOUT  
SURGERY**
  - 3. LONG TERM RELIEF OF ANNOYING SYMPTOMS**
- 






# **BENIGN PROSTATIC HYPERPLASIA(BPH)**

- **MOST FREQUENT BENIGN TUMOR IN MEN**
- **MEN OLDER THAN 60 YEARS - > 50 %**
- **IT INCREASES WITH AGE**
- **ALL MEN WILL HAVE BPH IF THEY LIVE LONG  
ENOUGH**





# **ALL BPH TREATMENTS**

- **MAY BE ASSOCIATED TO SEVERE COMPLICATION:**
    - **URINARY INCONTINENCE**
    - **SEXUAL DYSFUNCTION**
      - **RETROGRADE EJACULATION**
      - **IMPOTENCE**
- 





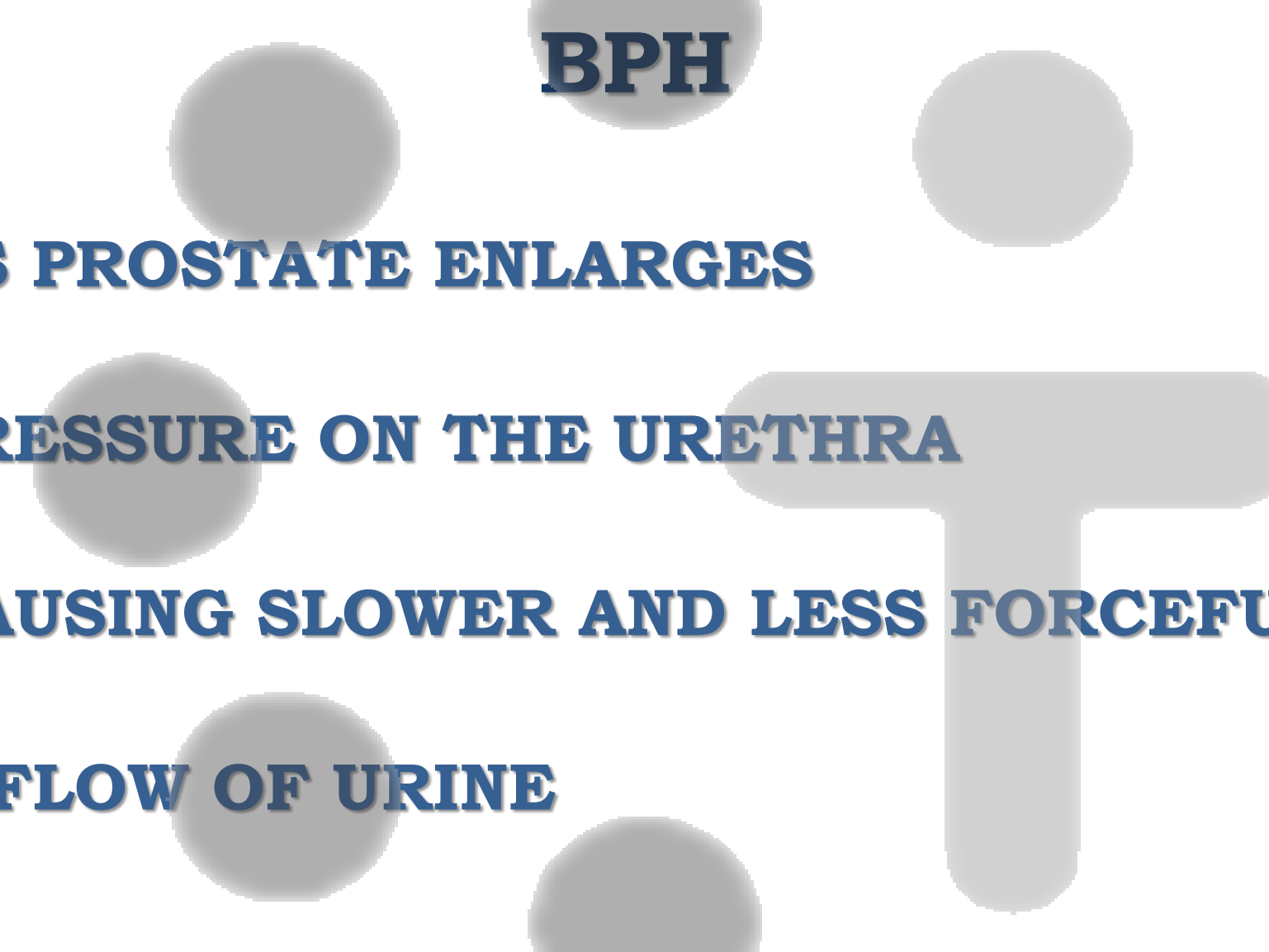
# **NEED OF NEW TREATMENT**

- **TO IMPROVE PATIENT SYMPTOMS**
  - **LOW COMPLICATIONS RATE**
  - **NO SEXUAL DYSFUNCTION**
  - **NO URINARY INCONTINENCE**
  - **NO BLOOD LOSS**
- 

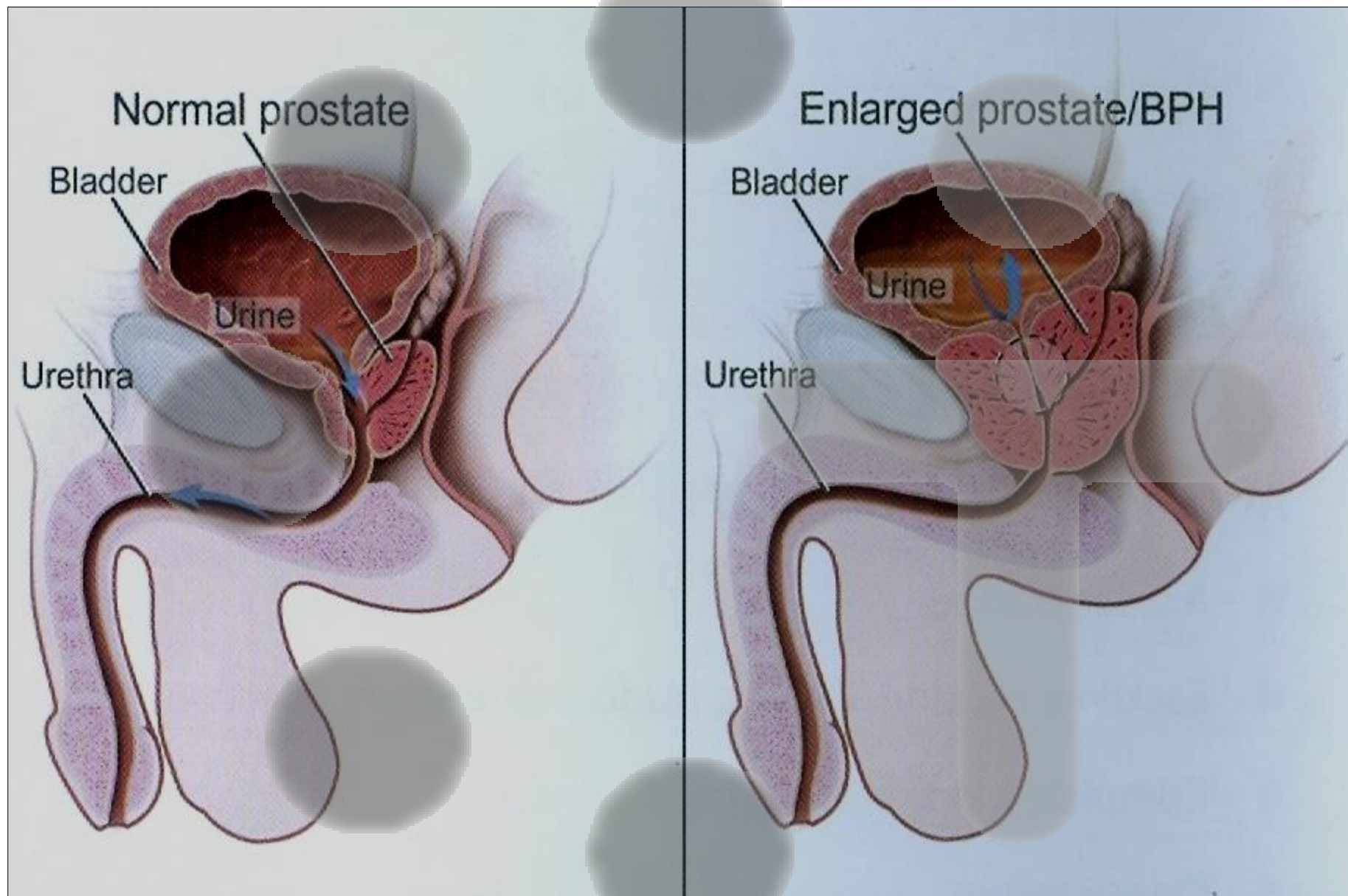




# **BPH**

- **AS PROSTATE ENLARGES**
  - **PRESSURE ON THE URETHRA**
  - **CAUSING SLOWER AND LESS FORCEFUL**
    - **FLOW OF URINE**
- 









# **BPH – ANNOYING SYMPTOMS**

- **URINARY FREQUENCY**
- **URGENCY**
- **PASSING URINE MORE OFTEN**  
– **(PARTICULARLY AT NIGHT)**
- **WEAKENED STREAM**
- **INCOMPLETE BLADDER EMPTYING**

**SIGNIFICANT NEGATIVE IMPACT IN  
QUALITY OF LIFE**





# **STANDARD TREATMENT FOR BPH**

- **SURGERY - PROSTATECTOMY**
  - **TRANSURETHRAL RESECTION (TURP)**
  - **OPEN (FOR LARGE PROSTATE)**
- **GENERAL ANESTHESIA**
- **SEVERE COMPLICATIONS**
  - **URINARY INCONTINENCE**
  - **SEXUAL DYSFUNCTION**
    - **IMPOTENCE**
    - **RETROGRADE EJACULATION**



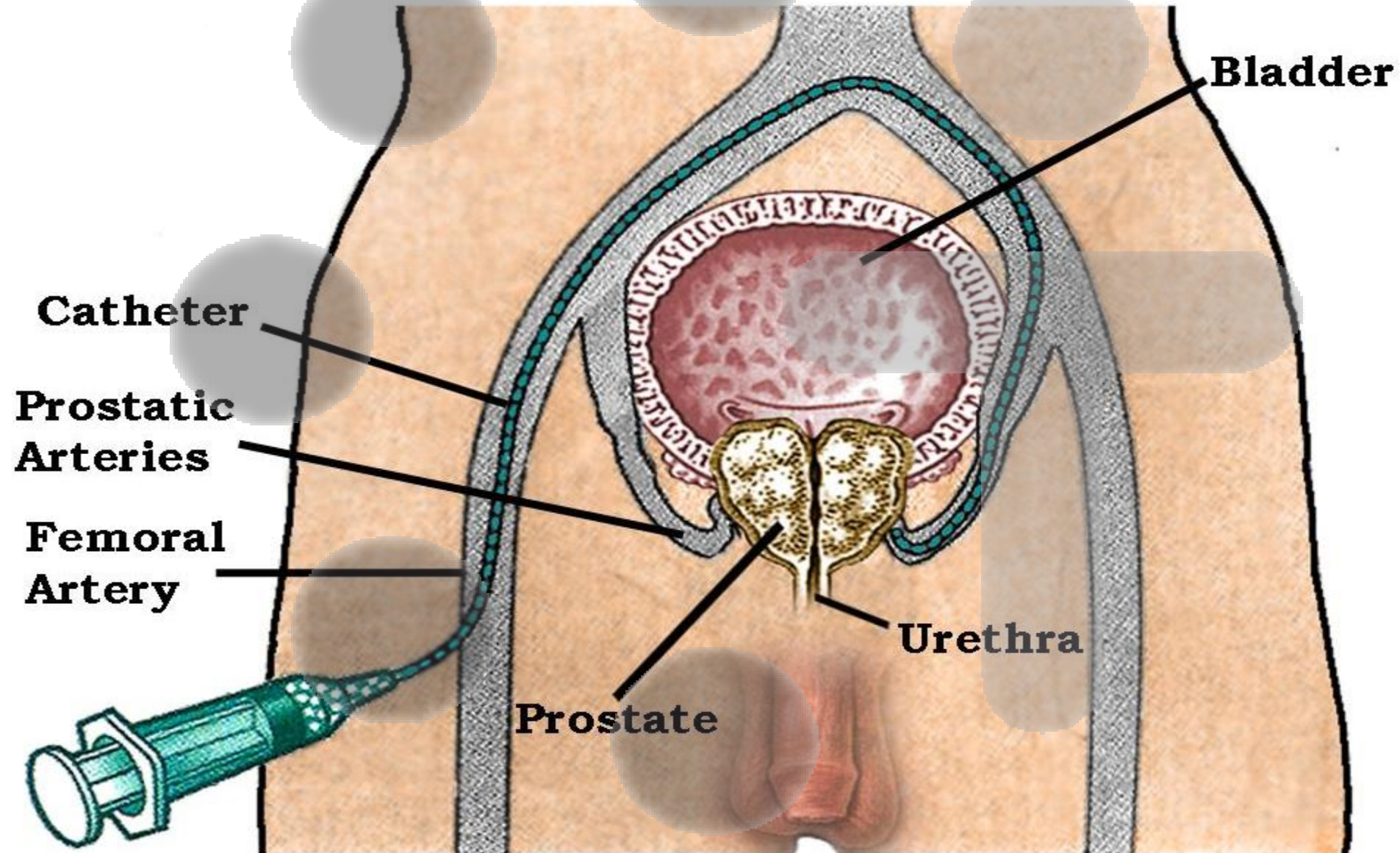


# **WHAT IS PAE?**

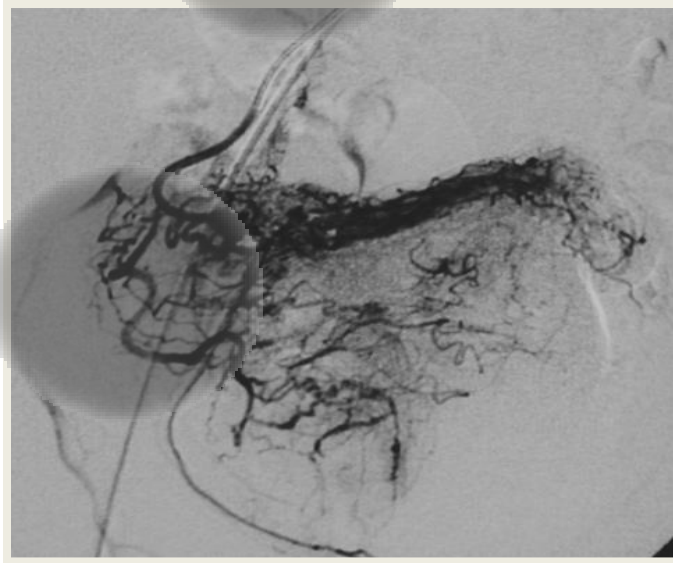
- **PAE IS A MINIMALLY INVASIVE PROCEDURE**
- **THROUGH A TINY INCISION IN THE GROIN**
- **SMALL TUBE (CATHETER) ADVANCES TO THE PROSTATIC ARTERIES**
- **MICROSCOPIC BEADS ARE RELEASED AND BLOCK BLOOD SUPPLY TO THE PROSTATE**
- **WITHOUT BLOOD IRRIGATION THE PROSTATE WILL SHRINK**



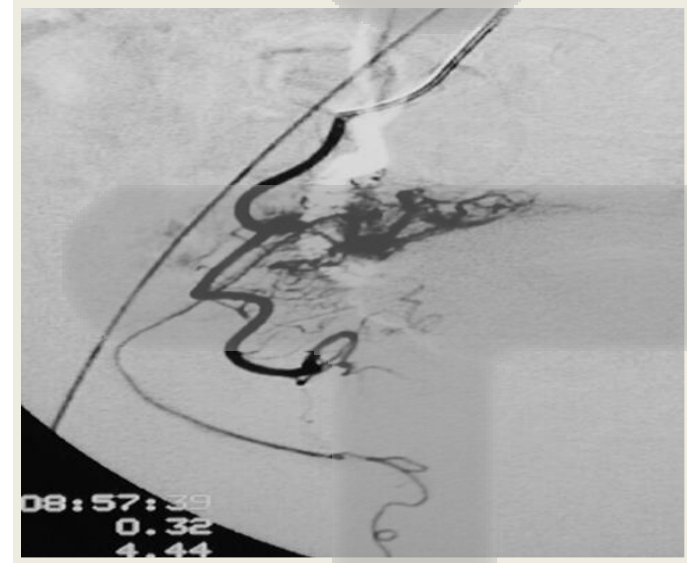
# SCHEMATIC DRAWING OF PAE



# PROSTATIC ARTERIOGRAPHY



**BEFORE**



**AFTER PAE**

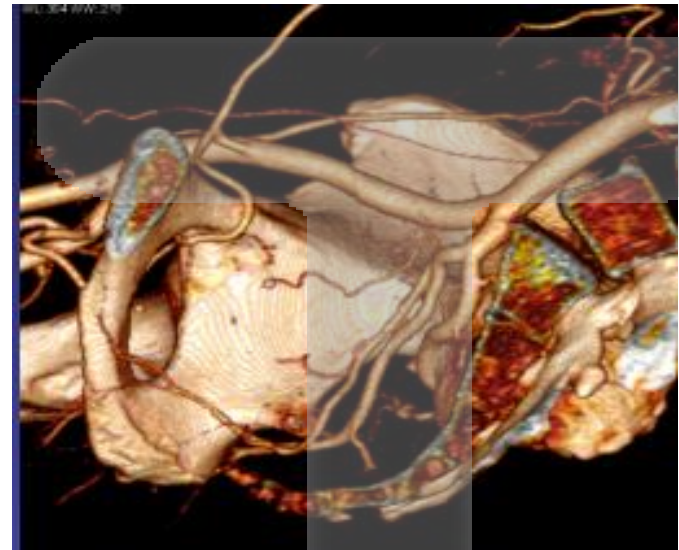
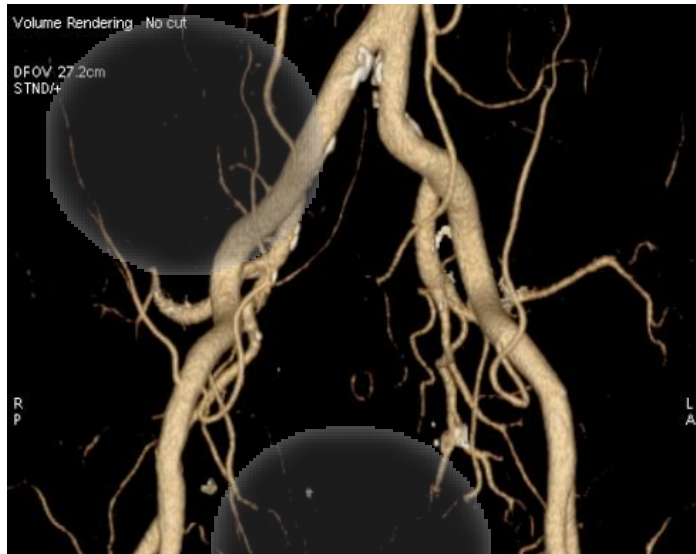




# **BETTER RESULTS**

- **THE LARGER PROSTATE IS**
  - **THE MORE SEVERE SYMPTOMS ARE**
- 

# **PATIENTS SELECTION PRE-PROCEDURE CT ANGIOGRAPHY**



**TO EVALUATE POSSIBILITY AND  
DIFFICULTY OF PAE**



# ANGIO SUITE



# WHO PERFORMS PAE?

- **AN INTERVENTIONAL RADIOLOGIST, A DOCTOR WHO SPECIALIZES IN MINIMALLY INVASIVE TARGETED TREATMENTS**
- **THROUGH CATHETERS GUIDED BY IMAGING EQUIPEMENT**



- **LESS RISK, LESS PAIN, LESS RECOVERY TIME**
- **NO SCAR JUST A BANDAID**
- **[www.sirweb.org](http://www.sirweb.org)**





# **PAE MAY BE THE ONLY FEASIBLE AND EFFECTIVE TREATMENT FOR BPH**

- IN MEN WHO CAN NOT HAVE TURP DUE TO THE SIZE OF THEIR PROSTATE**
- INADVISABLE FOR MEN TO UNDERGO GENERAL ANESTHESIA**
- REFUSE MEDICAL THERAPY**
- KEEP FERTILITY**



# **SUCCESS RATES (500 CASES)**

- **3 MONTHS - 87.2%**
- **18 MONTHS - 80.2%**
- **3 YEARS - 72.9%**
  - **> 4 – 5 YEARS – 12 PATIENTS**
  - **SEXUAL FUNCTION ↑ 31.6 %**
  - **POSSIBLE TO REPEAT**

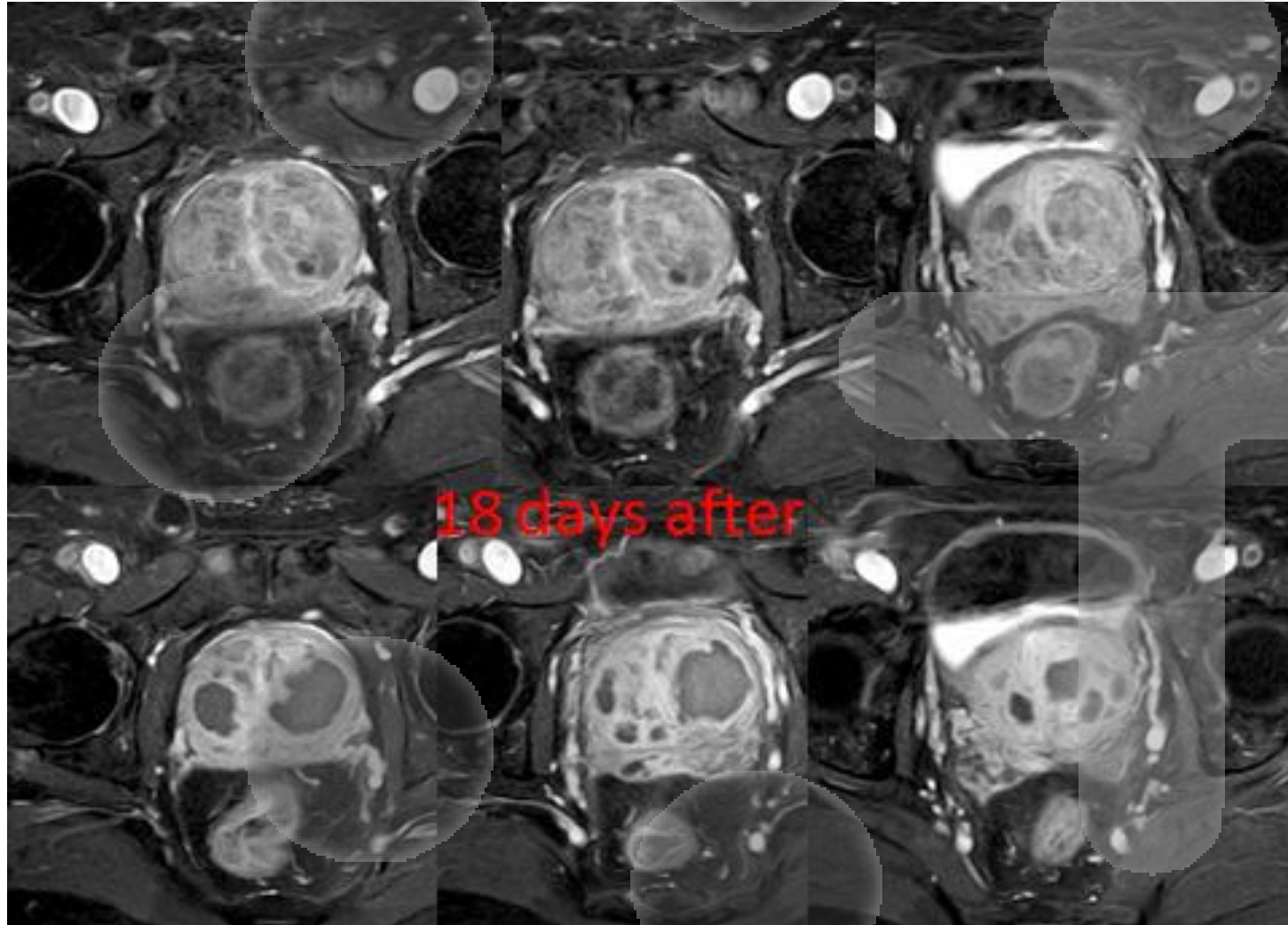




# **RESULTS OF PAE**

- **SIMILAR TO SURGERY**
- **FEWER COMPLICATIONS**
- **DISCHARGED 3 - 6 HOURS AFTER TREATMENT**
- **ALMOST IMMEDIATE SYMPTOM RELIEF**
- **FAST RECOVERY LASTING RELIEF**
- **STOP MEDICAL THERAPY**

# MAGNETIC RESONANCE



BEFORE

AFTER





# **MAJOR COMPLICATION**

- **LACK OF BLOOD FLOW TO THE BLADDER WALL**
- **PELVIC PAIN LASTING FOR 3 MONTHS**



# **MORE ABOUT PAE**

↪ **Internet**

↪ **Press**

↪ **Consult IR**

↪ **Urologists should watch PAE**







# HIGHLIGHTS

- **BPH AFFECTS MORE THAN HALF OF MEN BY AGE 60**
- **500 PATIENT STUDY SUGGESTS PAE VIABLE OPTION TO SURGERY**
- **PROVIDES LASTING RELIEF FROM URINARY SYMPTOMS**
- **72,9% IMPROVEMENT AT 3 YEARS**



# **FUTURE OF PAE**

- ↪ **VERY LARGE PROSTATE > 100cc + SEVERE SYMPTOMS**
- ↪ **HIGH RISK FOR SURGERY**
- ↪ **TO KEEP FERTILITY (4 PREGNANCIES)**
- ↪ **REFUSE OTHER TREATMENTS**





# **PAE MAY BE THE STANDARD TREATMENT DUE TO**

- **IF PATIENTS KNOW PAE THEY MAY NOT ACCEPT OTHER TREATMENT.**
- **PATIENT'S CHOICE**
  - **LOCAL ANESTHESIA, PAINLESS, AND DISCHARGED ON THE SAME DAY**
  - **GOOD RESULTS AND LOW COMPLICATION RATE**
  - **NO SEXUAL DYSFUNCTION**
- **GREAT INTEREST BY INTERVENTIONAL RADIOLOGISTS AND SOME UROLOGISTS**



# **EMAIL FROM A VISITOR UROLOGIST**

- THANK YOU VERY MUCH FOR 2  
EXCELLENT DAYS
- I WAS VERY IMPRESSED
- IF I EVER DEVELOPED BPH SYMPTOMS  
MYSELF, AS AN UROLOGIST; I WILL  
CONSIDER PAE. BEFORE ANY OTHER  
INVASIVE PROCEDURE





# EMAIL FROM A TREATED PATIENT

- It is great news about my wife now having a baby. I am 63 years old now and my wife is 32 years. I know for a fact that without your help and operation I would have never been able to make my wife pregnant, so I thank you very much for all your help.
- I can certainly recommend any guy who is having prostate problems to have the Prostate Artery Embolization Operation.









Grávida de trigêmeos





# **PAE CONCLUSION**

- **BPH > 50 % MEN OLDER 60 YEARS**
- **PAE IS A MINIMALLY INVASIVE OUTPATIENT PROCEDURE UNDER LOCAL ANESTHESIA**
- **ALMOST IMMEDIATE CLINICAL IMPROVEMENT, FAST RECOVERY, LASTING RESULTS**
- **IMPROVEMENT OF SYMPTOMS IS COMPARABLE TO TURP**
- **NO SEXUAL DYSFUNCTION, NO URINARY INCONTINENCE**
- **1<sup>ST</sup> OPTION TREATMENT, IF PATIENTS KNOW**
- **COULD BECOME STANDARD TREATMENT FOR BPH**



Dr. Mitsuharu Tsuychiya, Prof. Doutor Tadashi Yano and Prof. Doutor Kenji Kamakita, in angio suite.



