

The advantage and disadvantage of usage of double - J after ureteroscopy

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Abstract

in the treatment of stone impacted in the ureter have different method one of these was ureteroscopy. many of urologist have a controversy of usage of double -J after operation , one of them refuse the option and other remained it important .

By used a scoring a many patient from many urologist in al_Karkh hospital and compared them as

1. Very long time of urological operation ' (0.001)
- 2 . At least stone freeing ratio (p= 0.0.1) .
3. about complication like haematuria ' p=(0.001) urinary tract infection p= (0.001) any irritation of bladder p=(0.001).
4. There was no difference in score between double- J or not about hospitaltion and generalised fever .
5. increase of score found in readmission in non-double- J. group .
6. failed in clearance of stone in double- J.
7. double- J. succes in stop of unplanned hospital stay.

Introduction

Many research about renal stone which occur in 10% of people & increase to 45% stone in the ureter cause sever obstruction and have colicky pain with urinary tract obstruction one of most usage treatment was ureteroscopy for this complication usage of double- J and consider the way for drain of stone.

Staying of double- J increase healing of uretral injuryca used by operation and to compet formatted of uretral stricture the side effect of double- J al the following :

- 1- Increase encrustation.
- 2- Refluxing of urine
- 3- Pain and restless due to irritated the mucosal urinary system.
- 4- Increase of urinary tract infection.

Materials and methods

The information included from many patient treating in my hospital and patients have stone in the ureter put them double- J after uretroscop .

The research out of any patient with renal or urethral oru rinarybl adder stone the scoring a bout operation data from time and freeing of stone and other complication .

Outcome of research

The research depend on :

- 1.biggest of the stone .
- 2.place of stone .
3. age of the patient .
4. time of uretroscop .
5. hospitalization stay .
6. freeing of the stone.
- 7 unplanned readmission.
- 8 . colicky pain and dysuria .
9. infection of urinary system.
10. stricture of ureter.

Study quality

The research classify as low_ risk and unclear and very high risk.

Depend on all the criteria & information collect

From the patients operation by ureteroscopy with or without double J.

Results

we calling a 251 patient with double- J and 196 without double- J

the time of staying of double- J from 7 days to 8 weeks depending to previously mentioned 2 age , biggest of the stone and any complication .

about the perioperative result we found the longtime of operation was 2.0 to 7.83 ; $p<0.001$ and freeing of uretral stone 0.33 to 0.81 ; $p=0.01$)

about staying in the hospital was no difference in hours from 1.35 to 3.61 ; $p=0.38$

about unplanned readmission increase in the non putting double- J from 0.31 to 0.85; $p=0.01$

about rate of complication included dysuria increase in double- J from 2.41 to 6.01, $p<0.001$) irritation also increase from 2.2 to 9.2; $p<0.001$) the rate of urinary tract infection is 1.15 to 3.41; $p<0.01$ haematuria also increase in double- J from 1.82 to 7.3 $p<0.001$).

about flank colicky pain and irritating voiding pain increase from 1.48 to 4.15; $p<0.001$) no change occur about fever (0.55 to 1.16; $p=0.25$) and uretral stricture also 0.2 to 1.15 $p=0.25$)

Discussion

Ureteroscopy was commonly used for treatment of uretral stones . but nowadays putting a double- J before or after ureteroscopy becomes common.

The modern textbook of urology talks about uretral stant decrease a colicky pain & risk of obstruction .but not effect on decrease streets of stones and infection risks . but for uretral trauma , fragmented stones,h aematuria , urinary infection, pregnancy or perforation of ureter , the double- J was necessary for these complicated patients. On my hospital a survey carrying out show that

the urologist used routinely double- J at 60% of patients; size of double- J was also important after uteretroscopy but these is no standard diameter specific for each operation .

Duration of double- J is of stop significant but mostly the urologist No longer than 2_3 month for removal .

No obvious significant between double- J and age of patient , gender , size of the stone.

Double- J was small benefits in clearance of stone and relieving of pain.

Double- J have sever effect like dysurea , UTI , urgency and haematuria

Double- J have low incidence of re_hospitalization .

No relationship between insertion of double- J and clearance of stone .

Double- J increase intrapelvic pressure during voiding causing reflux and discomfort .

Complication of longstanding double- J stanting occur as following :

1. oedema of ureteral wall .
2. hyerplasia of epithelium .
3. inflammatory cell and destrction .
4. still hydronephrosis .
5. migration of double- J .
6. stone forming on double- J & fragmentation

7. obstruction of double- J the risk of unplanned hospital stay increase in non- stenting patients.

Cases need readmission :

1. sever flank colicky pain .
2. increase temperature .
3. Gross haematuria.

Alpha _ blocker was used to decrease the complication of stenting ureter , and to relieve stent related pain .

The exact time of removed of double- J is still unknown but

most of urologist was recommended for 2_3 month .

Conclusion

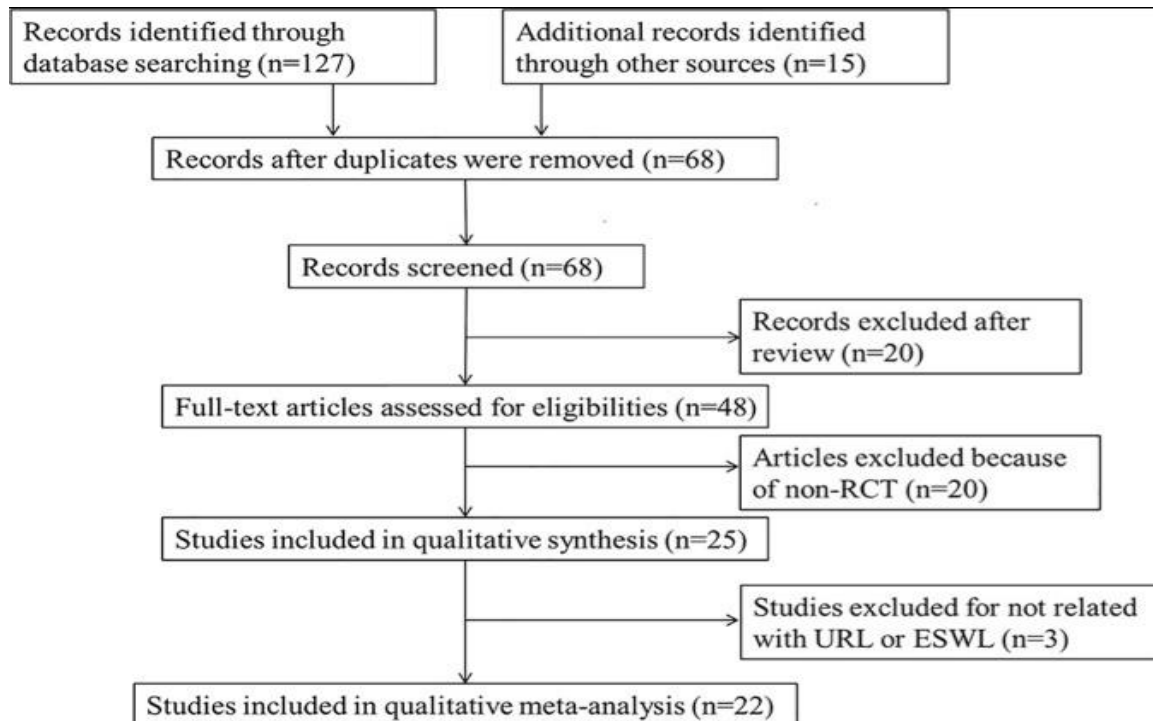
1. No indication for double-J stenting for treatment after ureteroscopy .
2. More complication like pain , fever , hematuria , UTI after stenting .
3. It is necessary for put double- J after ureteroscopy in most urologist operation .
4. No time exactly for remove of double- J
5. Decrease unplanned hospitalization after stenting

References

1. Lopez M, Hoppe B. History, epidemiology and regional diversities of urolithiasis. *Pediatr Nephrol.* 2010; 25: 49–59. 10.1007/s00467-008-0960-5 - [DOI](#) - [PMC](#) - [PubMed](#)
2. Stamatelou KK, Francis ME, Jones CA, Nyberg LM, Curhan GC. Time trends in reported prevalence of kidney stones in the United States: 1976–1994. *Kidney Int.* 2003; 63: 1817–1823. 10.1046/j.1523-1755.2003.00917.x - [DOI](#) - [PubMed](#)
3. Turk C, Petrik A, Sarica K, Seitz C, Skolarikos A, Straub M, et al. EAU Guidelines on Interventional Treatment for Urolithiasis. *Eur Urol.* 2016; 69: 475–482. 10.1016/j.eururo.2015.07.041 - [DOI](#) - [PubMed](#)
4. Aghamir SM, Mohammadi A, Farahmand H, Meysamie AP. Effects of prophylactic insertion of Double-J stents to decrease episodes of renal colic in patients with recurrent ureteral stones. *J Endourol.* 2008; 22: 435–437. 10.1089/end.2007.0163 - [DOI](#) - [PubMed](#)
5. Chew BH, Seitz C. Impact of ureteral stenting in ureteroscopy. *Curr Opin Urol.* 2016; 26: 76–80. 10.1097/MOU.0000000000000234 - [DOI](#) - [PubMed](#)

Fig 1

Picture show selection of researching study .

**Fig 2**

Picture show indication of included risk.

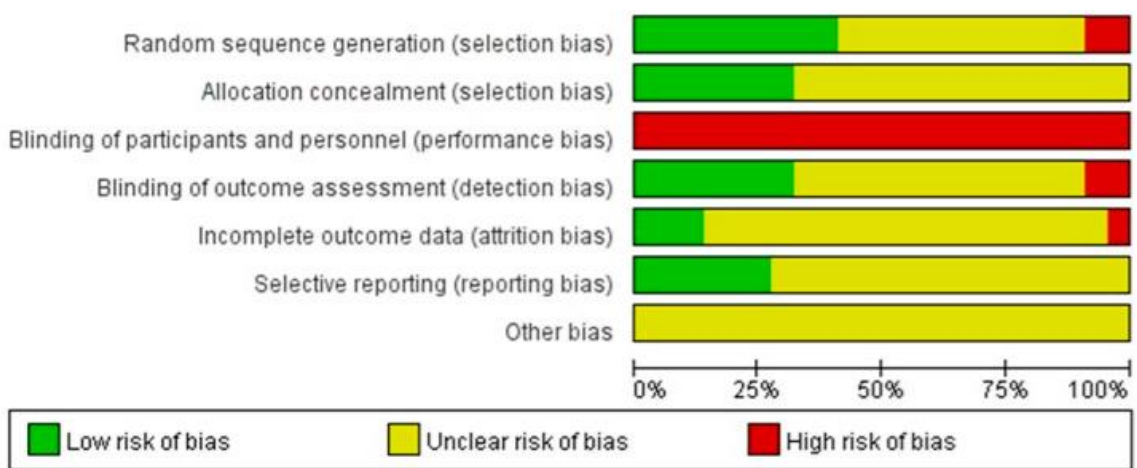


Fig 3

Assessment of included risk in summary.

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Al-Ba'adani 2006	?	?	●	?	?	?	?
Başeskioglu 2011	?	?	●	●	?	?	?
Borboroglu 2001	●	●	●	●	?	?	?
Cevik 2010	●	?	●	?	?	?	?
Chauhan 2015	●	●	●	●	●	●	?
Chen 2002	●	●	●	?	?	?	?
Cheung 2003	●	●	●	●	?	●	?
Damiano 2004	●	?	●	●	?	?	?
Denstedt 2001	●	●	●	●	?	?	?
El-Assmy 2006	?	?	●	?	?	?	?
Ghoneim 2010	●	?	●	?	?	?	?
Hussein 2006	?	?	●	●	?	?	?
Ibrahim 2008	●	●	●	●	?	●	?
Isen 2008	?	?	●	?	?	?	?
Jeong 2004	?	?	●	?	?	?	?
Netto 2001	?	?	●	?	?	?	?
Stoungaristos 2012	●	?	●	?	?	●	?
Shao 2008	?	●	●	●	●	●	?
Srivastava 2003	●	?	●	?	●	?	?
Wang 2009	?	?	●	?	●	●	?
Xu 2009	?	?	●	?	?	?	?
Zaki 2011	?	?	●	?	?	?	?

Fig 4

Picture showing operation time (per minute).

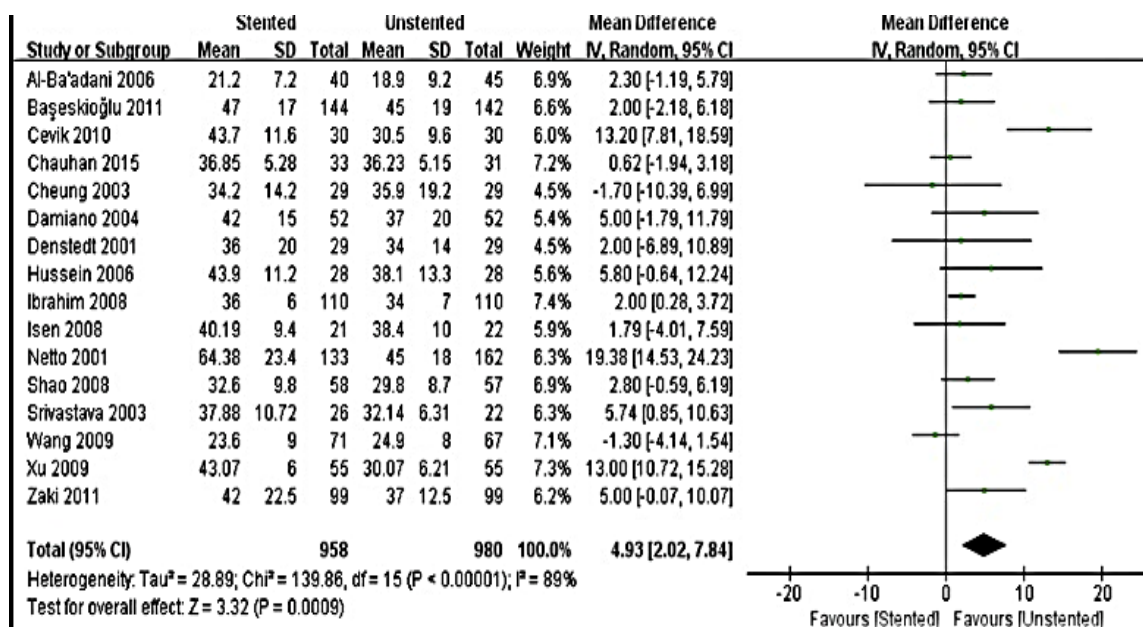


Fig 5

Picture show stone free ratio .

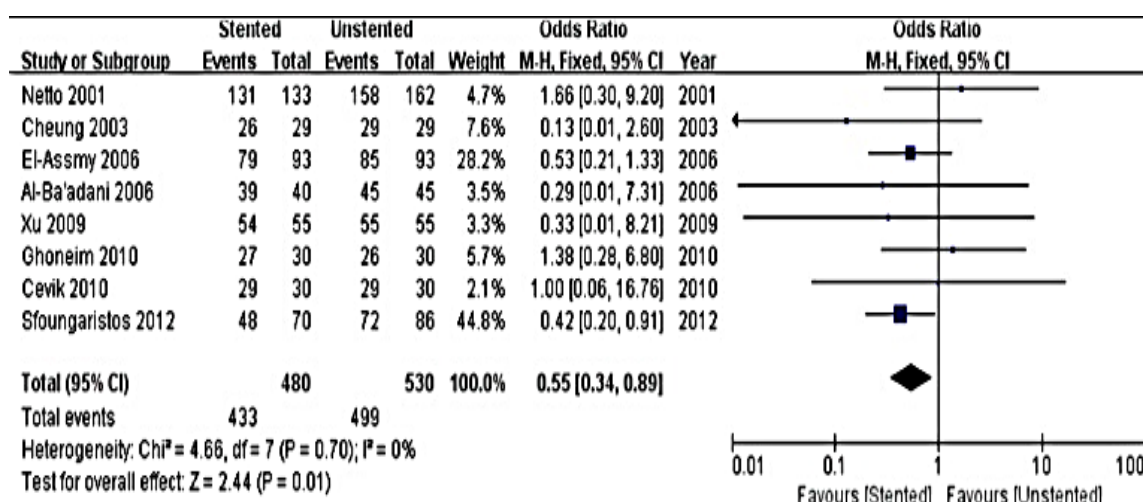


Fig 6

Picture show visual analogue scoring.

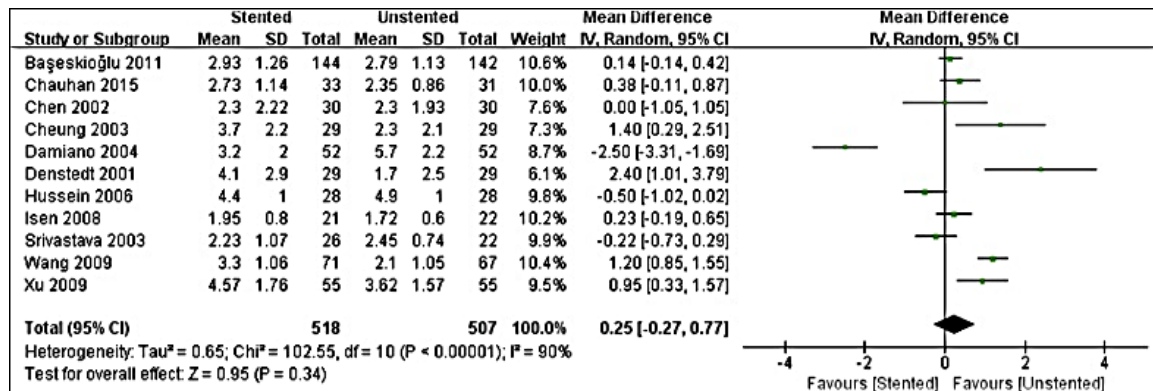


Fig 7

Picture show readmission ratio.

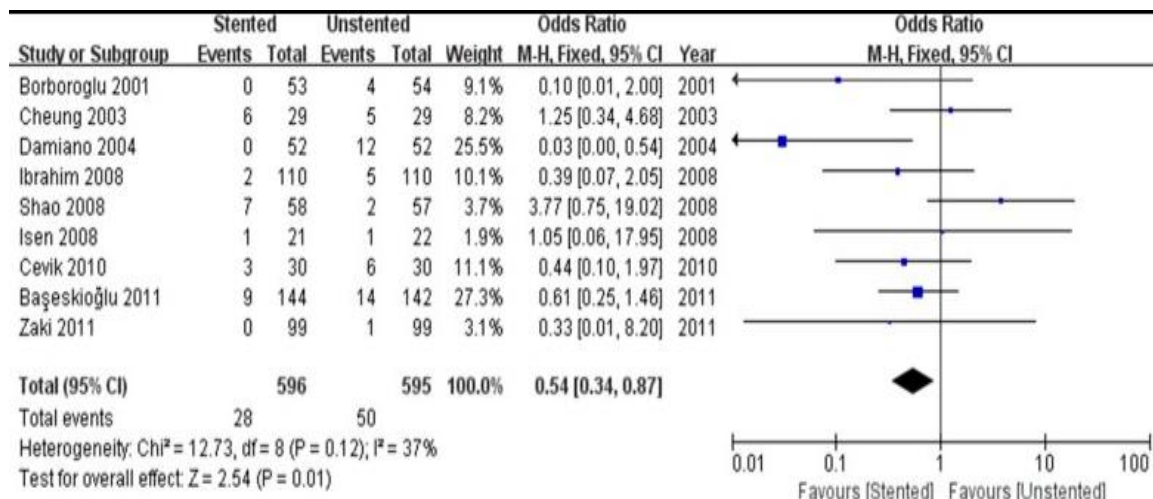


Fig 8

Picture show duration rate .

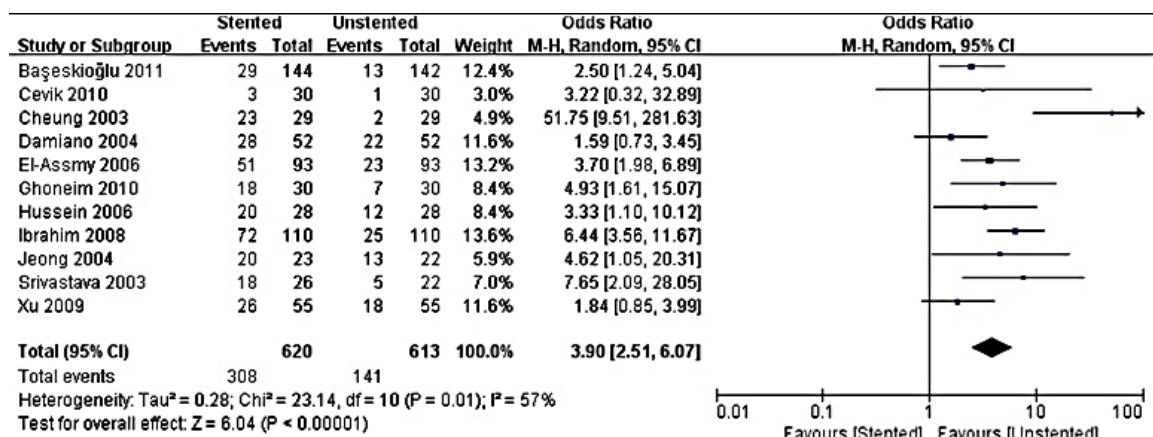


Fig 9

Picture show irritative symptom .

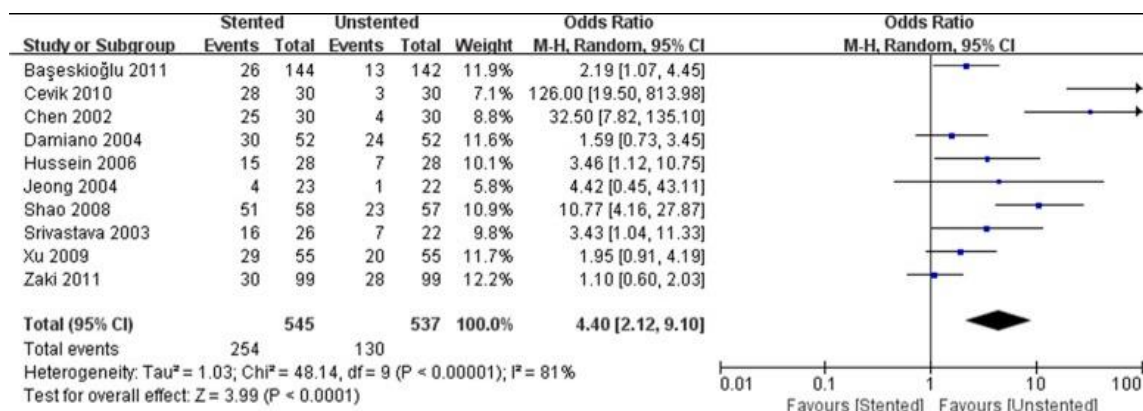


Fig 10

Picture show urinary infection.

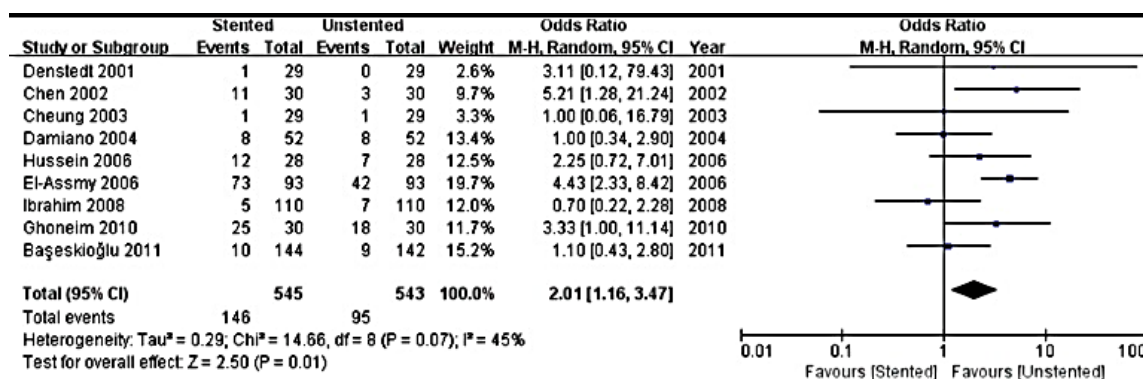


Fig 11

Picture show hematuria.

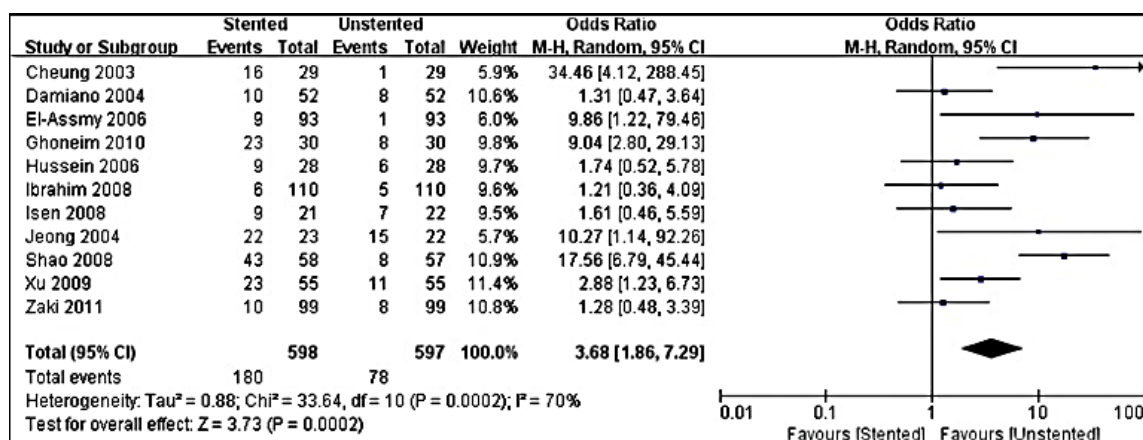


Fig 12

Picture show pain ratio.

