

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: - www.journalijar.com</p> <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</p> <p>Article DOI: 10.21474/IJAR01/3693 DOI URL: http://dx.doi.org/10.21474/IJAR01/3693</p>	 <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) ISSN 2320-5407</p> <p>Journal homepage: http://www.journalijar.com Journal DOI: 10.21474/IJAR01</p>
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RESEARCH ARTICLE

WRIST ARTHRODESIS IN RHEUMATOID ARTHRITIS USING RECONSTRUCTION PLAT.

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Manuscript Info

Manuscript History

Received: 13 January 2017
Final Accepted: 08 February 2017
Published: March 2017

Abstract

This paper tries to find out the implications of trade liberalization on international trade tax revenues and its macroeconomic implication on Pakistan economy. The theoretical approach of trade reforms and its impact on the direction of change of revenue is ambiguous because of its dependence on the productivity of 'trade tax revenues'. By using the data of twenty five years, the paper first establishes the productivity of 'trade tax revenues' in Pakistan, then by an econometric analysis exploration of the relationship between trade revenues and trade liberalization in Pakistan is done. It was observed through our analysis that there is high productivity of trade tax revenues, further, our results show a positive and significant relationship between trade liberalization and collection of trade tax revenue. To support this relationship, a second test of Granger's causality is also performed which confirm the causal relationship between trade tax revenues and trade liberalization. It was suggested that supportive macroeconomic policies are prerequisite for successful trade liberalization.

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Introduction:-

Rheumatoid arthritis is a disease of chronic polyarticular inflammation that leads to joint swelling, joint deformity and loss of joint function. RA occurs in 1 to 3% of adult population with women affected slightly more than men¹. Rheumatoid hand deformities usually are bilateral and symmetrical. Wrist and metacarpophalangeal Joints are affected early². Management depends upon pain and loss of function. Operative treatment varies with the patient's age, handedness, occupation, needs, and expectations³. Five patients of RA from agricultural background were reviewed after wrist arthrodesis using 3.5mm reconstruction plate and iliac crest bone graft. All cases united well with marked improvement in wrist strength and diminished pain allowed improved function.

Material and Methods:-

Five patients (four female and one male) aged between 28 to 44 years underwent this procedure in our hospital. All conservative methods including wrist brace, intra articular steroid and PIN denervation⁴ were tried. Patients were explained about the procedure and limitations. Patients were admitted after all relevant investigations and preanaesthetic check up. Wrist arthrodesis was done through dorsal approach and fusion was done in 10 to 20 degree of dorsiflexion and neutral to 5 degree of ulnar deviation. Pop slab was given from above elbow to MCP joint with finger in slight flexion. At 3 weeks stitches were removed and below elbow pop cast was given for further 6 weeks. Routine radiography at 6 and 12 weeks was done to check bony fusion.

Observation and Results:-

Patients were followed for a period of ten months. There were five wrist in four female and one male. Right side was in three and left in two. All procedures were done in dominant limbs. Finger motion was regained after 3 months of aggressive physiotherapy in four cases. One female aged 44 years took 5 months to regain full finger movements due to poor follow up and uncomplained physio. All cases united well between 12 to 16 weeks.



1. X ray showing wrist arthritis pre operative AP



2. X ray pre operative lateral view



3. Interosseus radio ulnar ligaments (intraoperative)



4. Xray at 3 weeks AP view



5. X ray at 3 weeks lat view



6. X ray 3 months lateral view



7. X ray 3 months lateral view

Discussion:-

Despite having trends towards many reconstructive procedures wrist arthrodesis remains an important procedure. Sorial et al. reported successful fusion in 18 patients with the use of a radial sliding graft fixed with a dynamic compression plate⁵. There are many studies in literature of wrist arthrodesis in painful wrist with syntheses fusion plate^{6,7} but due to poor patient affordability we used 3.5 mm reconstruction plate. Rheumatoid arthritis with painful destruction of the joint is a common indication for wrist fusion. Plate fixation provides great stability in all directions and delivers a high fusion rate. Common problems associated with wrist arthrodesis plates are plate discomfort and tendon irritation⁸. But we did not encounter any of these problems.

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