During the same time that Spiessl was expounding the AO doctrine, Champy et al. in France were developing the concept of adaptive infection rate in the treatment of mandibular angle fractures with an AO comminuted and infected mandibular fractures; Ellis reported a 7.5% AO reconstruction plates also impacted the management of immediate function.

Developed during functional loading of the mandible and allow for neutralize all forces (tension, compression, torsion, shearing) under conditions of absolute stability. Rigid internal fixation must be performed to mobilize fracture segments. The basic principles of the AO, outlined by Spiessl, is primary bone healing. 

The description of mandibular fracture, and most patients received either improper treatment or no treatment. Hippocrates was the first to characterize mandibular fractures, and Susceptible to injuries in farm-related accidents. Occupational accident in the maxillofacial region rates 0.9-5% and, in some cases, can reach 9%. Based on their occupation, patients are classified as farm and forestry workers, construction workers, factory workers, craftsmen, service workers, and office workers. This paper describes a farm-related maxillofacial trauma in our Kanchipuram district.

At present most of the articles are present with accidents in highways, very less presentation are available regarding the rural population and rural accidents. mandibular fractures are the most common of all maxillofacial fractures because the only mobile bone of the facial skeleton and also more vulnerable because of its mechanically weak components, including the condylar process, and both sides of the mentum As early as In 1650 BC Egyptian papyrus described about the examination, diagnosis, and treatment of mandible fractures. The description of mandibular fracture, and most patients received either improper treatment or no treatment. Hippocrates was the first to characterize mandibular fractures, and Susceptible to injuries in farm-related accidents. Occupational accident in the maxillofacial region rates 0.9-5% and, in some cases, can reach 9%. Based on their occupation, patients are classified as farm and forestry workers, construction workers, factory workers, craftsmen, service workers, and office workers. This paper describes a farm-related maxillofacial trauma in our Kanchipuram district.

In 19th century, when Gilmer reformed the treatment of fractures by fixed arch bars on the mandible and the maxilla. In 1888, Schede was the first to use a solid steel plate held by 4 screws for fixation. The technique of rigid internal fixation was developed and popularized by Arthur Adam andchauffier Osteosynthesis (AO/ASIF) in Europe in the 1970s. The basic principles of the AO, outlined by Spiessl, is primary bone healing under conditions of absolute stability. Rigid internal fixation must neutralize all forces (tension, compression, torsion, shearing) developed during functional loading of the mandible and allow for immediate function.

AO reconstruction plates also impacted the management of comminuted and infected mandibular fractures; Ellis reported a 7.5% infection rate in treatment of mandibular angle fractures with an AO reconstruction plate without intermaxillary fixation (IMF). 

During the same time that Spiessl was expounding the AO doctrine, Champy et al. in France were developing the concept of adaptive osteosynthesis. Champy advocated transloral placement of small, thin, malleable, stainless steel miniplates with mono cortical screws along an ideal osteosynthesis line of the mandible. Champy believed that compression plates were unnecessary because of masticatory forces that produce a natural strain of compression along the inferior border. These 2 changes of AO rigid internal fixation and the Champy method of monocortical miniplates revolutionized the treatment approach to mandibular fractures. Many fractures previously treated with closed reduction or open reduction with wire osteosynthesis are now commonly treated with open reduction with plate and screw fixation.

A study undertaken to study mandibular fractures clinico-radiologically with an aim to calculate incidence and study pattern and the commonest site of fractures in population in and around Chengalpattu in Kanchipuram district. Patients presenting with history of trauma at agricultural work in various places in and around Kanchipuram district with maxillofacial injury were included in this study. Detailed case history was recorded followed by thorough clinical examination, and radiological interpretation was done for establishing the diagnosis and the data obtained was analyzed statistically. Out of 141 patients with mandibular fractures, highest percentage was found in 21–35 years of age with male predominance. Road traffic accidents were the most common cause of fracture with para symphysis being commonest site. Second Commonest combination was para symphysis with sub condyle. The incidence and causes of mandibular fracture reflect trauma patterns within the community and can provide a guide to the design of programs geared toward prevention and treatment.

**Introduction**
Faciomaxillary injuries represent an extremely stressful experience and causing an acute and long-term functional, psychosocial and economical impairment to the patient. The face is the most exposed part of the human body, and susceptible to injuries in farm-related accidents. Occupational accident in the maxillofacial region rates 0.9-5% and, in some cases, can reach 9%. Based on their occupation, patients are classified as farm and forestry workers, construction workers, factory workers, craftsmen, service workers, and office workers. This paper describes a farm-related maxillofacial trauma in our Kanchipuram district.

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**Aim and objective**
To analyze the trend in mandibular fractures in agricultural workers.

To analyze the etiology, anatomic distribution age and gender distribution of mandibular fractures and outcome of the mandibular fractures in agricultural population.

**Inclusion Criteria**
- All patients referred for mandible fracture with or without other faciomaxillary injuries
- A level of mental status permitting an adequate neurosensory examination and cooperation.
- Patients who have had a follow up of minimum of 6 months.

**Exclusion Criteria**
- Patients below 10 years of age
- Fracture with the head (brain) injury
- Patients with repeated admissions and incomplete information were excluded from this study

**Materials and Methods**
A prospective study was designed to analyze patients fulfilling the inclusion criteria. The data was collected and preserved in a specifically designed protocol. Etiology, fracture characteristics, treatment, sensory disturbances (if any) were recorded. Patients were followed up for a minimum of 6 months. The study sample was derived from the series of patients with mandibular fractures evaluated and treated by the Department of Plastic Surgery in Chengalpattu Government Medical College Hospital, between January 2015 and June 2017. Institutional ethical clearance obtained & guidelines of strictly followed. Written consent obtained from the patient and caregivers.

**Patient Population and Data Collection**
Patients referred from the Department of trauma and general surgery for maxillofacial injuries are included. 244 participants with maxillofacial fractures had complete diagnostic records. Data on age, sex, soft tissue injuries, dental trauma, and maxillofacial fracture type were collected and standardized by an investigator on the basis of the case histories, clinical and radiographic examinations, and medical records of the patients.

Based on the anatomical site involvement Mandibular fractures were classified as condylar (unilateral or bilateral), symphysis, body, angle, ramus, and coronoid fractures.

Per-operation pictures:

CT-Facial Bone:

Results
we observed that, total number of patients included were 141, Isolated mandibular fracture in 92 patients among them unilateral fractures were 68 (73Bilateral fractures 24 (26%) %), among the isolated fractures involving right side were 46 (69%) and left side were 22 (31%). 49 patients (34.7%) treated for associated faciomaxillary injuries, symphysis 10 (10%) and Of 10 symphysis fracture three cases had unilateral canine impaction which were seen in OPG.

Total number of mandibular fracture 141
Most common cause of fracture was road traffic accidents (RTA) 110 (78.6%) followed by fall injury 20, bull gore injuries 5 cases, Assault 3 cases Tractor injuries, 3.

Etiology of mandibular fractures
Among unilateral fractures, the most common site was para symphysis and in bilateral # body was the more common. The ramus is the least common site.

Distribution of mandibular fractures according to anatomic site
The order of fracture site from most to least common were para symphysis 40,28%49 (32.45%), body11,8.5 % 42 (27.8%), angle 20 14%,22 (14.56%), symphysis 10 (11.9%), condyle129.1% 13 (8.6%), coronoid 4 (2.64%), and lastly the ramus 5.35%3 (1.98%)

Anatomical and gender distribution of mandibular fractures
In his study we observed that female gender was significantly associated with body and angle fracture with significant relationship between etiology (assault) and multiple site fracture such as para symphysis-angle, body-condyle, body-angle, and symphysis-condyle.

Discussion
The etiology for mandibular fractures have changed dramatically with the arrival of higher speed vehicles especially two wheelers. Mandible the etiology for mandibular fractures have changed dramatically with the arrival of higher speed vehicles especially two wheelers. Mandible

The second commonest combination of fracture in our study is para symphysis with sub condyle accounting for 18.8%, probably due to the horizontally directed impact to para symphysis resulting fracture at the site of impact, this axial force of impact para symphysis proceeded along the mandibular body to the cranial base through the condyle leading to the concentration of the tensile strain at the condylar neck hence resulting in its fracture.

In our study, the para symphysis was the most frequently affected site probably it is due to length of canine root making the mandible anatomically weak in this region leading to most fractures.

Among multiple fracture we observed that the para symphysis was commonly associated with angle, which is in accordance with the study by Dongas and Hall and contrary to Ogunadare et al have reported body with angle as the most common combination.

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This is in contrary to Dongas and Hall who found para symphysis with angle, Ogunadare et al. reported body with angle as the commonest combination.

The age incidence in this study increased with age above 20-35 (54 %) years and the second common age group is 10-20 years with 14cases with (9.92%)

As the age progresses, they are more involved in physical activities such as fast and rash driving, interpersonal violence, alcohol abuse.

This study revealed that due to lack of education and unawareness of traffic rules most of the fractures occur in a rural population.

In our study 70 % of the patient underwent ORIF without MMF. In second group comprising 30 % ORIF done with MMF. Outcome is equal in both groups in Post-operative period.

In our study one mandible # needs miniplate removal after 1.month due to infection

Conclusion
We noticed that most common cause was RTA because of increasing number of vehicles. The sheer pace of modern life with high-speed driving as well as an increasing violent and intolerant society have made facial trauma a form of social disease. Faulty road design too was a major reason for accidents. The State transport department had recently embarked on several measures to contain accidents, starting with enforcement of the helmet rule and making driving license mandatory for purchase and registration of vehicles. Banning of use of cellphone during driving. We also believe that imposing strict transport law might reduce the mandibular fracture

Most frequent cause of fracture mandible in this study was RTA, which is in accordance with Love et al., Bataineh, Shabah et al., Al Ahmedet al., and Brasiliero and Passeri and alcohol abuse during driving.

This is due to increasing number of vehicles especially two wheelers in recent times among the rural population and also high-speed driving along the poorly, faulty designed village panchayat roads without helmet and safety guide lines. Another factor is using cellphone while driving. One of the commonest cause for more number RTA in rural areas are due to stray dogs and cattle’s come across and hit the speedy vehicles.

Males are predominantly affected, which is in agreement with other studies due to more involvement in outdoor activities also most of them are agricultural workers and transport heavy luggages in two wheeler, also not realize about the importance of wearing helmet and helmet laws, and bad shape of the rural roads.

In this study, fall from height is the second common etiologic factor accounting for 42.6% of the cases.

The anatomic distribution and incidence of mandibular fracture are widely variable. Many authors reported symphysis as the most frequently affected site whereas, others reported this to be mandibular body, angle, and condyle.

In our study, the para symphysis was the most frequently affected site probably it is due to length of canine root making the mandible anatomically weak in this region leading to most fractures.

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