

“ To know the reasons for Orthodontic case transfer at Department of Dentistry, Orthodontics, IGIMS, Patna, Bihar from other medical-dental colleges and private dental clinics setups: A retrospective -prospective study”

Dr Sanjay Kumar¹, Dr. A.K Sharma²

Additional Professor, (Orthodontics), Dept. of Dentistry, IGIMS, Patna, Bihar, India¹ Professor & Head, Dept, of Dentistry, IGIMS, Patna, Bihar, India²

Address of corresponding author: Dr Sanjay Kumar, doctors quarter no. New “E” type =3/4, Indira Gandhi institute of medical sciences, Sheikhpura, Patna: Pin code- 800014, Bihar, India

Abstract:

Background: The case transfer in the medical field is a well known procedure where the case is transferred to the higher and/ or tertiary care centre for better and specialized treatment. These cases are transferred to higher centre because they have specialized expertise and the facilities to treat those cases. Similarly, In dentistry we have several sub-speciality subjects. One of them is Orthodontic and dentofacial orthopaedic where braces are placed for malocclusion correction and orthognathic surgery are done for malformed face and many more complex treatment procedures pertaining to orthodontics cases are done in this field of dentistry. Usually, these cases are treated by orthodontists, but unfortunately there are very few centres in each state/city for treatment of such cases. So due to various reasons of patients, the incomplete and/ or in progress orthodontic cases are transferred to the Department of Dentistry (Orthodontics), IGIMS, Patna, Bihar, India for their treatment. So, we have decided to know the reasons for orthodontic cases transfer at Department of Dentistry, (Orthodontics), Indira Gandhi Institute of Medical Sciences, Patna, Bihar, India. **Aim and Objective:** To know the reason for orthodontic case transfer at Dept. of Dentistry, (Orthodontics), IGIMS, Patna, Bihar and to know the number of transferred cases reported to the dental OPD (Orthodontics), in comparison to the new orthodontic patients. **Material and methods:** The record of transferred orthodontics patients were collected from the dental OPD (Orthodontics), Dept. of Dentistry, Indira Gandhi Institute of Medical Sciences, Patna, Bihar, India. The data was included from the dental record book from 16th December 2019 to 31st of December 2020. Each transfer case was received with their pervious treatment record and the reasons to transfer at this centre were noted. **Study design:** A retrospective - prospective study. **Statistical analysis:** The results were analysed in the form of their percentages and frequencies. **Results:** There are total of 160 orthodontic patients reported to the , dental OPD,(Orthodontics) at Department of Dentistry for consultation during from 16th December 2019 to 31st of December 2020. Out of that, 38 patients (23.75%) were transferred to this centre for treatment having various reasons mentioned in the table no. 1. **Conclusions:** The reasons for orthodontic case transfer at this centre is clear from the study that they have the trust that they will get cost effective treatment at this centre. Apart from this many cases reported to this centre during covid-19 pandemic lockdown where most of the dental setups were shut down and or were hesitant to treat patients. We also suggest to the competent authority to establish postgraduate dental institute with all dental speciality.

Key words: Malocclusion, Orthodontics case transfer, Orthodontic speciality, Mode of treatment.

Aim and objective: To know the reason for orthodontic case transfer at Dept. of Dentistry, (Orthodontics), IGIMS, Patna, Bihar, India and also to know the number of transferred cases reported to the dental OPD (Orthodontics) in comparison to the new orthodontic patients.

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I. Introduction:

Malocclusion is one of the most common dental diseases in children and young adults. As per the literature available and internet search, probably there is no data available in Bihar about the malocclusion prevalence in the population of Bihar^{1, 2}. The department of dentistry providing the speciality Orthodontic care for the patients. In short span of time more than five thousand orthodontic patients consulted for their problems at the dental OPD (Orthodontics), Department of Dentistry, IGIMS, Patna, Bihar, India. Apart from the old and new cases, those who were reported with orthodontic problems already under treatment at various centres were also re- treated and given appropriate advice. At present this centre has few speciality doctors, with limited

resources and facilities. It should be well known to us that in Bihar there is one Government dental college, one super specialty centre, AIIMS, Patna, Bihar, more than 04 private dental colleges with uncountable private dental clinics rendering the dental/Orthodontic services. Still the numbers of orthodontic patients consulting the dental OPD (Orthodontics) at IGIMS, Patna is in good number.

II. Review Of Literature:

The sequelae of malocclusion viz., protruding, irregular or maloccluded teeth can cause number of problems for patients. Discrimination because of facial appearance, problem related to oral function including difficulties in jaw movement, TMJ dysfunction and difficulty in mastication, swallowing or speech, greater susceptibility to trauma periodontal disease or tooth decay. Psycho-social problem: A number of studies in recent years confirmed what is intuitively obvious, that severe malocclusion is likely to be considered as social handicap. Well aligned teeth and a pleasing smile carry positive status in the ^{society}³. It seems clear that the major reason for seeking orthodontic treatment is to minimize psychosocial problems related to their dental and facial appearance. A severe malocclusion may affect or compromise all aspects of oral functions viz. TMJ pain and dysfunction and clenching disorders etc. It is termed as “Handicapping malocclusion”^{4, 5}. As per the literature search through various means, no study was done in Bihar on this topic. So, it was decided to carry out the study on this topic to know the reasons of Orthodontic case transfer at Dept. of Dentistry, (Orthodontics), IGIMS, Patna, Bihar, India.

III. Material And Methods:

The record of transferred orthodontics patients will be collected from the dental OPD (Orthodontics), Dept. of Dentistry, Indira Gandhi Institute of Medical Sciences, Patna, Bihar, India. The data included from the dental record book from 16th December 2019 to 31st of December 2020. Each transferred case was received with their previous treatment record. The reasons for transfer at this centre were also noted.

Inclusion criteria:

1. Patients reported with complain of malocclusion and gave the history of previous orthodontic treatment was included in the study.
2. Transferred orthodontic cases from other institutes/ dental colleges will be included for treatment and/or advice etc.
3. Patient agrees for treatment as per rule and regulation of the department and institutes.

Exclusion criteria:

1. New and old orthodontic patients were not included in the study.
2. Patients don't agree for treatment as per rules and regulations of institutes.
3. Patients have acute and chronic debilitating disease will be not included.
4. Those patients with contraindication for orthodontic treatment such as uncontrolled diabetes mellitus, malignant hypertension, bony disorders etc will be not included.

Study design: A retrospective - prospective study.

Statistical analysis: The results were calculated and analysed in the form percentages and frequencies.

IV. Results:

There were 160 Orthodontics patients who reported to the Dental OPD, (Orthodontics) at Dept. of Dentistry, Indira Gandhi Institutes of Medical Sciences, Patna, Bihar, India. Out of that 38 patients were referred by the various dental setups from outside to Department of Dentistry, (Orthodontics), IGIMS, Patna, Bihar, India. The various reasons of transfer of patients at this centre were recorded in table no.1. The table no.02 and the table no.03 gives distribution of malocclusion and the types of treatment mechanics used for their treatment consequently.

Table no.01: The reasons for treatment at IGIMS, Patna, Bihar, India of transferred orthodontic patients

Serial no.	Reason for treatment preferred by patients, at Dept. of Dentistry, Orthodontics, IGIMS, Patna, Bihar, India	No. of transferred Orthodontic patients (%)
1.	Good orthodontic treatment facility available at dental department at IGIMS, Patna, Bihar	19 (50%)
2.	Good orthodontic treatment facility available at IGIMS, Patna, patients were referred from AIIMS, Patna, Bihar	04 (10.52%)
3.	Case transfer from outside IGIMS, due to many reasons. Choose this center for treatment because of good orthodontic treatment facility and expertise available.	08 (21.05%)
5.	Transfer from outside state and or stuck in Patna as covid -19 pandemic lockdown. Came for orthodontic treatment at IGIMS, Patna as orthodontic	07 (18.42%)

	treatment was available during lockdown period.	
Total no. of patients		38

Table no.02: The distribution of types of malocclusion

Serial no.	Types of malocclusion	Number patients (%)
1.	Class1 crowding	14(36.84%)
2.	Class1 spacing	05(13.15%)
3.	Class11 div.1	09(23.68%)
4.	Class11 div.11	01(2.63%)
5.	Class11 bimaxillary protrusion	09(23.68%)

Table no.03: The types of mechano-therapy used for treatment

Serial no	Types of orthodontic treatment provided	No. of patients
1.	Removable orthodontics appliance	09(23.68%)
2.	Fixed orthodontics mechano-therapy	21(55.26%)
3.	Hybrid orthodontics treatment (removable followed by fixed orthodontics mechano- therapy)	04(10.52%)
4.	Wait watch/follow-up	04(10.52%)

V. Discussion:

There were 160 new orthodontics patients reported to the dental OPD, (Orthodontics) Dept. of Dentistry, Indira Gandhi Institutes of Medical Sciences, Patna, Bihar, India, out of that 38 (23.75%) patients were referred by the various dental setups to Department of Dentistry, (Orthodontics), Patna, Bihar, India(table no.01). Though the number of transfer case at this centre were satisfactory, but it is encouraging when we consider the situation in term of man powers and facility. The various reasons of transfer of patients at this centre were noted in the table no. 1. Since there was no study on this topic in Bihar so, it was decided to carry out the study to know the reasons for case transfer at Dept. Of Dentistry, (Orthodontics) Patna, Bihar, India where there is limited resources and man power. If we club the reasons of patients to choose treatment at IGIMS, Patna, Bihar, the following reasons could be noticed as follows, availability of good facility and an orthodontist, some patients in covid-19 pandemic stuck down in Patna, had come for regular follow-up as well as emergency services as their appliance was broken and traumatizing oral mucosa, few case are even referred by Dept. of Dentistry, AIIMS, Patna for better treatment and some patients from neighbouring states visited department for treatment as well (tableno.01). The reasons were very clear that patients needed dedicated approach for their treatment as orthodontic cases are usually of long duration. In table no.02 the distribution of malocclusion is mentioned where Class1 crowding, Class11 div1 and Class1 bimaxillary protrusions are predominant. In table no.03 the types of the mechano-therapy used for treatment are mentioned. There is more fixed orthodontics and hybrid orthodontics treatments mechanics were preferred than removable orthodontics. At this centre orthodontic treatment is far more economical as compared to other dental setups. This study could be also viewed as the self assessment score for orthodontists.

VI. Conclusion:

This study will help us in improving the facility and procurement of orthodontic armamentarium for better orthodontic treatment at low costs.

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