

不正咬合의 齒牙不正樣相에 關한 研究

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I. 緒 論

우리나라는 近年에 와서 齒科矯正學이 急速히 發展되어 있으며 口腔疾患의 하나인 不正咬合에 對한 關心도가 漸次高潮되어 가고 있다.

齒科矯正學은 齒牙, 齒牙周圍組織, 顎骨 및 이에 附隨되는 諸般構造의 正常的인 成長 發育을 研究함과 同時에 이와같은 構造의 不正한 成長과 發育으로 인한 咬合의 不正, 顎骨의 異常發育, 顎顔面의 不正한 狀態等を 改善하기 爲한 學問으로서 모든 不正狀態를 豫防하며 人間의 福祉 增進에 寄與하고자 努力하고있다.

不正咬合이란 口腔保健上 重要的인 齒科의 三大 疾患中의 하나로서 咬合의 機能을 構成하는 齒牙, 顎骨, 筋肉, 및 이에 分布된 神經系와 組織의 複合體가 均衡을 잃은 狀態로서 咀嚼機能, 言語, 顎骨의 正常發育 및 顎顔面筋肉의 活動에 障害을 미친다 特히 齒牙齶蝕症 및 齒牙周圍組織에 疾病을 惹起하는 要因이 되고 顎關節에도 障害을 주며 不正咬合으로 인해서 心理的으로 劣等感을 가지므로 性格에도 惡影響을 미쳐 消極的인 對人關係를

갖게된다.

不正咬合의 樣相에 關한 研究는 Angle¹⁾ Andrew²⁾ Hellman⁴⁾ 등의 研究를 들수있다. Angle氏 分類法으로 研究한 學者는 Chiavaro³⁾, Altemus⁴⁾, Summers³²⁾, Ast, Carlos와 Cons³⁾, Draker⁵⁾, Massler와 Franke²¹⁾ 등이 있으며 國內에서는 徐³⁰⁾, 孫³⁶⁾, 그리고 劉⁴³⁾ 등을 들수있다.

不正咬合이 諸般口腔疾病에 미치는 影響에 關한 研究業績에서 Frank¹¹⁾, Palmer²⁰⁾, Mc Dowell²⁴⁾, 등은 言語(發音)에 障害을 미친다고 報告하였으며 Tweed³⁹⁾는 不正咬合으로 인한 心理的 障害에 關해서 報告하였다. Dotto와 Hall⁹⁾, Glichman¹²⁾, Poulton과 Aaronson²⁷⁾ 등은 不正咬合이 齒周疾患에 미치는 影響에 關해서 報告하였으며 Draker⁹⁾, Hillen brand와 Harold¹⁶⁾, Newman²⁵⁾, Salzman^{32), 34), 35), 37)}, Van Kirk와 Penne⁴²⁾ 등은 不正咬合을 疫學的으로 分析하여 各各의 不正咬合의 樣相에 關한 缺陷度를 測定하여 社會醫療制度上의 醫療惠澤의 優先順位를 決定하는데 利用하였다.

著者는 不正咬合으로 인한 諸般障害을 防止하기 爲하여 不正咬合을 疫學的으로 分析하여 公衆口腔保健의 問題點을 解決하는 資料로서 Angle氏 方法으로 類形을 分類하고 各類形別 齒牙不正樣相을 研究하여 이에 知見을 얻었기에 報告하는 바이다.

II. 研究對象 및 方法

(1) 研究對象

研究對象은 各齒科大學 附屬病院 矯正科에 來院한 不正咬合者의 模型을 研究對象으로 하였으며 特히 缺損齒가 없고 咬合이 完成된 滿 十二歲以上인 男子 355名과 女子 448名을 對象으로 調査하였다.

(2) 研究方法

모든 構造 및 模型을 肉眼的 判別에 依해서 Angle氏 分類法을 適用하였으며 個個齒牙의 不正狀態는 矯正用 彈線을 利用하였다.

(3) 評價基準

(가) 不正咬合 類形은 Angle氏 分類法을 適用하였다.

(나) 齒牙의 不正樣相

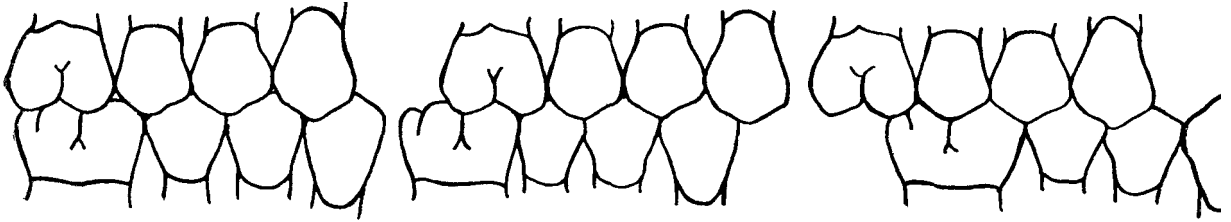
(1) 開咬咬合齒(openbite teeth), 交叉咬合齒(cross bite teeth), 切端咬合齒(edge-to-edge bite teeth),

過蓋咬合齒(deep overbite teeth), 叢生齒(crowding teeth)는 齒牙群別 또는 個個齒牙別로 調査하였다.

(2) 低位犬齒(high canine)는 上顎의 左右側을 區分 하여 調査하였다.

(3) 正中離開(anterior diastema)는 上顎(左右)中切 齒間에 나타나는 齒間離開로서 側切齒를 包含해서 上顎 前齒에 나타나는 齒間離開는 包含시키지 않았다.

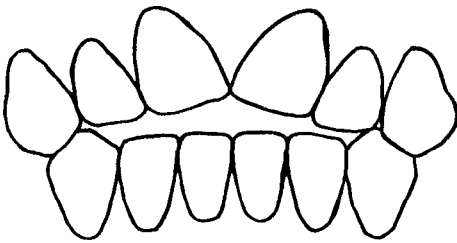
(4) 齒間離開(spacing)는 正中離開를 除外한 齒牙間의 離開狀態를 個個齒牙別 또는 群別로 調査하였다.



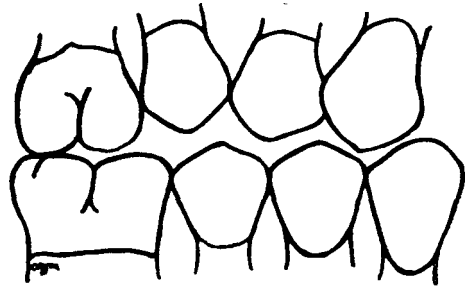
一級不正咬合

二級不正咬合

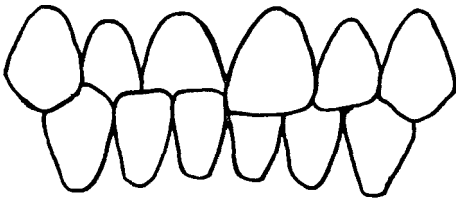
三級不正咬合



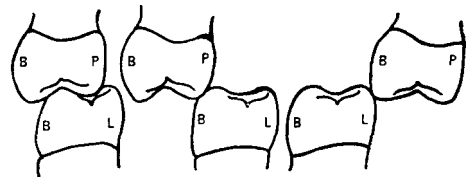
前齒部開咬咬合



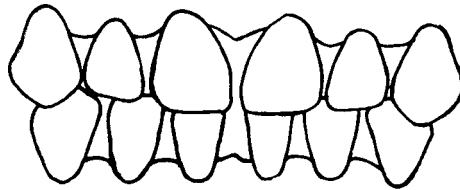
臼齒部開咬咬合



前齒部交叉咬合



政常頰舌關係 頰側反對咬合 舌側反對咬合



前齒部齒間離開

(다) 個個齒牙의 不正樣相

(1) 叢生齒(crowding teeth)는 矯正用 彈線을 利用 하여 頰側 또는 舌側으로 轉位하였거나 回轉을 同伴하여 轉位된 齒牙를 調査하였다.

(2) 齒間離開齒(spacing teeth)는 個個齒牙間의 隣接

點이 서로 떨어져있는 齒牙를 調査하였다.

(3) 回轉齒(rotating teeth)는 時計方向이든 그 反對 方向이든 回轉된 齒牙는 모두 包含시켰다.

(4) 開咬咬合齒(openbite teeth)는 對咬時 咬合面이 接觸되지 않는 齒牙를 對象으로 調査하였다.

(5) 交叉咬合齒(crossbite teeth)는 對咬時 對合齒와 交叉되거나 反對咬合이 되는 齒牙를 對象으로 調査하였다.

(6) 切端咬合齒(edge to edge bite teeth)는 對咬時 咬頭와 咬頭가 接觸하는 齒牙를 對象으로 調査하였다.

(라) 計算方法

研究成績은 百分率로 表示하였으며 少數 둘째자리에 서 半올림하였으며 Chi-square test를 實施하였다.

III. 研究成績

1. Angle氏의 不正咬合 分類方法에 依한 類形分布는 研究對象 不正咬合者의 39.2%(男子42.2% 女子 57.8%)가 一級不正咬合이었고 二級一類는 29.0%(男子 44.6% 女子 55.4%), 二級二類는 3.5%(男子 46.4% 女子 53.6%), 三級은 28.3%(男子 46.3% 女子 53.7%)였으며 全體의으로는 女子가 男子보다 11.4%(男子 44.3% 女子 55.7%)가 많았다.

($X^2=0.34$ $df(3)$ $p>0.01$, 表 1 참조).

2. 齒牙群別 齒牙不正樣相

表 2. 低位犬齒 分布

類 形	發 生 人 數			性 別 分 布 別			右 側 發 生 數		左 側 發 生 數	
	H	H T	H C	性 別	N	N H	R	R N	L	L N
一 級 不 正 咬 合 315	94	11.7%	29.8%	男	45	43.9%	38	84.4%	31	68.9%
				女	49	56.1%	38	77.6%	36	73.5%
二 級 一 類 不 正 咬 合 233	39	4.9%	16.7%	男	18	46.2%	18	100.0%	15	83.3%
				女	21	53.8%	18	85.7%	13	61.9%
二 級 二 類 不 正 咬 合 28	15	1.9%	53.6%	男	8	46.7%	8	100.0%	8	100.0%
				女	7	53.3%	6	85.7%	6	85.7%
三 級 不 正 咬 合 227	53	6.6%	23.4%	男	36	67.9%	28	77.8%	24	66.7%
				女	17	32.1%	10	58.6%	13	76.5%
不 正 咬 合 者 總 數 803	201	25.1%		男	107	53.2%	92	86.0%	78	73.0%
				女	94	46.8%	72	76.6%	68	72.3%

$X^2=25.43$ $df(3)$ $p<0.01$

H: 類形別發生人數, T: 不正咬合者總數, C: 類形別不正咬合者數, N: 男女別人數, R: 右側發生數

L: 左側發生數

(2) 正中離開(diastema)는 全體 803名中 206名에서 나타나 25.6%의 頻度를 보였으며 一級不正咬合에서는 11.0%, 二級一類는 8.3%, 二級二類는 0.7%, 三級은 5.6%였으며 類形別 對比는 一級이 27.9%(男子 44.3% 女子 55.7%), 二級一類는 28.8%(男子 46.3% 女子 53.

表 1. 不正咬合의 類形別 分布

類形	總 數	男 子	女 子
一 級 不 正 咬 合	315 39.2%	133 42.2%	182 57.8%
二 級 一 類 不 正 咬 合	233 29.0%	104 44.6%	129 55.4%
二 級 二 類 不 正 咬 合	28 3.5%	13 46.4%	15 53.6%
三 級 不 正 咬 合	227 28.3%	105 46.3%	122 53.7%
不 正 咬 合 者 總 數	803 100%	355 44.3%	448 55.7%

$X^2=0.34$ $df(3)$ $p>0.01$

(1) 低位犬齒(high canine)는 一級不正咬合에서 11.7%로서 가장 頻度가 컸으며 二級二類에서는 1.9%로서 가장 낮았으나 各 類形別 對比는 一級에서 29.8%(男子43.9% 女子 56.1%), 二級一類에서는 16.7%(男子 46.2% 女子 53.8%), 二級二類는 53.6%(男子 46.7% 女子 53.3%), 三級은 23.4%(男子 67.9% 女子 32.1%)로서 二級二類에서 가장 頻度가 높았다. 男女比는 全體의으로 男子 53.2% 女子 46.8%로서 男子가 많았으며 左右比는 右측(男子 86.0% 女子 76.6%)이 左側(男子 73.0% 女子 72.3%)보다 男女 共히 頻度가 높았다. ($X^2=25.43$ $df(3)$ $p<0.01$, 表 2 참조).

7%), 二級二類는 21.4%(男子 50.0% 女子 50.0%), 三級은 19.8%(男子 46.7% 女子 53.3%)로서 類形別 正中離開의 分布는 二級一類에서 頻度가 가장 높았고 三級에서 가장 낮았다. ($X^2=6.00$ $df(3)$ $p>0.01$, 表 3 참조).

表 3. 正 中 離 開 分 布

類 形	發 生 人 數			男 子		女 子	
	D	D/T	D/C				
一級不正咬合 315	88	11.0%	27.9%	39	44.3%	49	55.7%
二級一類不正咬合 233	67	8.3%	28.8%	31	46.3%	36	53.7%
二級二類不正咬合 28	6	0.7%	21.4%	3	50.0%	3	50.0%
三級不正咬合 227	45	5.6%	19.8%	21	46.7%	24	53.3%
不正咬合者總數 803	206	25.6%		94	45.6%	112	54.4%

$X^2=6.0$ df(3) $p<0.01$

D : 類形別正中離開者數, T : 不正咬合者總數, C : 類形別不正咬合者數

(3) 叢生齒列(crowding)은全體不正咬合 研究對象의 67.8%(男子 45.0% 女子 55.0%)로서 높은 頻度를 보였으며 一級不正咬合은 27.8%, 二級一類는 19.2%, 二級二類는 2.2%, 三級은 18.6%였으며 類形別 對比는 一級이 70.8%(男子 43.5% 女子 56.5%), 二級一類는 66.1%(男子 44.8% 女子 55.2%), 二級二類는 64.3%(男子 38.9% 女子 61.1%), 三級은 65.6%(男子 48.3% 女子 51.7%)였다. 前齒部와 臼齒部의 對比는 모든 類

形의 不正咬合에서 前齒部의 頻度가 크게 높았으며 前齒部의 경우 上顎이 下顎보다 높은 反面에 臼齒部는 下顎이 上顎보다 높았다. 男子는 前齒部 上顎이 87.3%, 下顎이 66.1%, 臼齒部는 上顎이 4.9%, 下顎이 10.2%였으며 女子는 前齒部 上顎이 76.6%, 下顎이 62.9%, 臼齒部는 上顎이 3.3% 下顎은 7.0%였다. ($X^2=6.25$ df(3) $p>0.01$, 表 4 참조).

表 4. 叢 生 齒 列 分 布

類 形	發 生 人 數			男 子						女 子					
	Cr	Cr/T	Cr/C	人 數	前 齒 部		臼 齒 部		人 數	前 齒 部		臼 齒 部			
一級不正咬合 315	223	27.8%	70.8%	97	上	85	87.6%	3	3.1%	126	上	105	83.3%	3	2.4%
				43.5%	下	72	74.2%	4	4.1%	56.5%	下	98	77.8%	5	4.0%
二級一類不正咬合 233	154	19.2%	66.1%	69	上	67	97.1%	3	4.4%	85	上	69	81.2%	2	2.4%
				44.8%	下	48	70.0%	10	4.5%	55.2%	下	49	57.7%	7	8.2%
二級二類不正咬合 28	18	2.2%	64.3%	7	上	2	28.6%	0	0%	11	上	3	27.3%	0	0%
				38.9%	下	7	100%	1	14.3%	61.1%	下	10	90.9%	0	0%
三級不正咬合 227	149	18.6%	65.6%	72	上	60	83.3%	6	8.3%	77	上	52	67.5%	5	6.5%
				48.3%	下	35	48.6%	10	13.9%	51.7%	下	31	40.3%	9	11.7%
不正咬合者總數 803	544	67.8%		245	上	214	87.3%	12	4.9%	299	上	229	76.6%	10	3.3%
				45.0%	下	162	66.1%	25	10.2%	55.0%	下	188	62.9%	21	7.0%

$X^2=6.25$ df(3) $p<0.01$

Cr=類形別 發生人數 T=不正咬合者總數 C=類形別不正咬合者數

(4) 齒間離開(spacing)는全體 不正咬合者의 對比는 一級不正咬合이 8.2%, 二級一類는 7.6%, 二級二類는 0.2%, 三級이 7.0%였으며 全體의으로는 23.0%의 頻度를 보였으며 男女間의 對比는 男子 36.8%, 女子 63.2%

였다. 各 類形別 對比는 一級不正咬合이 21.0%(男子 31.8% 女子 68.2%), 二級一類는 26.1%(男子 44.3% 女子 55.7%), 二級二類는 7.1%(男子 50% 女子 50%), 三級은 24.7%(男子 33.9% 女子 66.1%)였다. 前齒部와

表 5. 齒間離開 分布

類 形	發 生 人 數			男 子						女 子					
	S	S/T	S/C	人 數	前 齒 部		臼 齒 部		人 數	前 齒 部		臼 齒 部			
一級不正咬合 315	66	8.2%	21.0%	21	上	20	95.2%	0	0%	45	上	43	95.6%	0	0%
				31.8%	下	10	47.6%	2	9.5%		68.2%	下	25	58.1%	0
二級一類不正咬合 233	61	7.6%	26.1%	27	上	25	92.6%	0	0%	34	上	29	85.3%	0	0%
				44.3%	下	10	37.0%	1	3.7%		55.7%	下	18	53.0%	2
二級二類不正咬合 28	2	0.2%	7.1%	1	上	1	100%	1	100%	1	上	1	100%	0	0%
				50.0%	下	1	100%	1	100%		50.0%	下	1	100%	0
三級不正咬合 227	56	7.0%	24.7%	19	上	17	89.5%	0	0%	37	上	36	97.3%	2	5.4%
				33.9%	下	12	63.2%	1	5.3%		66.1%	下	19	51.4%	1
不正咬合總數 803	185	23.0%		68	上	63	92.6%	1	1.5%	117	上	109	93.2%	2	1.7%
				36.8%	下	33	48.5%	5	7.4%		63.2%	下	63	53.8%	3

$X^2=5.85$ $df(3)$ $p<0.01$

S : 類形別 齒間離開者數 T : 不正咬合者總數 C : 類形別不正咬合者數

表 6. 開咬咬合 分布

類 形	發 生 人 數			男 子						女 子					
	O	O/T	O/C	人 數	前 齒 部		臼 齒 部		人 數	前 齒 部		臼 齒 部			
一級不正咬合 315	39	4.8%	12.4%	13	33.3%	13	100%	0	0%	26	66.7%	23	88.5%	3	11.5%
二級一類不正咬合 233	36	4.5%	15.5%	16	44.4%	16	100%	0	0%	20	55.6%	20	100%	0	0%
二組二類不正咬合 28	0	0%	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
三組不正咬合 227	40	5.0%	17.6%	20	50.0%	15	75.0%	10	25.0%	20	50.0%	19	95.0%	5	25.0%
不正咬合者總數 803	115	14.3%		49	42.6%	44	89.8%	10	20.4%	66	57.4%	62	93.9%	8	12.1%

$X^2=7.65$ $df(3)$ $p<0.01$

O : 類形別 開咬咬合者數 T : 不正咬合者 總數 C : 類形別 不正咬合者數

臼齒部の 男女間의 對比는 男子의 前齒部 上顎은 92.6%, 下顎은 48.5%, 臼齒部 上顎은 1.5%, 下顎은 7.4%였다. 女子의 前齒部 上顎은 93.2%, 下顎은 53.8%, 臼齒部 上顎은 1.7%. 下顎은 2.6%로서 前項의 叢生齒列과 거의 같은 樣相을 보였다. ($X^2=5.85$ $df(3)$ $p>0.01$, 表 5 참조).

(5) 開咬咬合(open bite)은 研究對象 不正咬合者의 1 4.3%(男子 42.6% 女子 57.4%)였으며 一級不正咬合은 4.8%, 二級一類는 4.5%, 二級二類는 0%, 三級은 5.0%였다. 各 類形別 對比는 一級不正咬合은 12.4%(男子 3 3.3% 女子 66.7%), 二級一類는 15.5%(男子 44.4% 女子 55.6%), 二級二類는 0%(男子 0% 女子 0%), 三級은 17.6%(男子 50.0% 女子 50.0%)였다. 前齒部와 臼齒部의 對比는 男子의 前齒部 89.8%, 臼齒部 20.4%, 女子

는 前齒部 93.9%, 臼齒部 12.1%였다. 二級二類에서 전혀 빈도를 보이지 않은것이 特徵이었다. ($X^2=7.65$ $df(3)$ $p>0.01$, 表 6 참조).

(6) 過蓋咬合(deep overbite)은 全體의 23.0%(男子 43.2% 女子 56.8%)였으며 類形別 對比는 一級不正咬合이 10.5%(男子 48.5% 女子 51.5%), 二級一類는 54.5%(男子 40.9% 女子 59.1%), 二級二類는 89.3%(男子 48.0% 女子 52.0%), 三級은 0%(男子 0% 女子 0%)로서 二級不正咬合과 三級不正咬合은 큰 差를 보였다. ($X^2=29.85$ $df(3)$ $p<0.01$, 表 7 참조).

(7) 交叉咬合(cross bite)은 一級不正咬合에서 3.7%, 二級一類는 2.7%, 二級二類는 0.5%, 三級은 15.6%로서 總22.5%(男子 55.8% 女子 44.2%)의 頻度를 보였다.

表 7. 過蓋咬合 分布

類 形	發 生 人 數			男 子		女 子	
	D	D/T	D/C				
一級不正咬合 315	33	4.1%	10.5%	16	48.5%	17	51.5%
二級一類不正咬合 233	127	15.8%	54.5%	52	40.9%	75	59.1%
二級二類不正咬合 28	25	3.1%	89.3%	12	48.0%	13	52.0%
三級不正咬合 227	0	0%	0%	0	0%	0	0%
不正咬合者總數 803	185	23.0%		80	43.2%	105	56.8%

$X^2 = 29.8$ df(3) $p < 0.01$

D : 類形別過蓋咬合者數 T : 總不正咬合者數 C : 類形別不正咬合者數

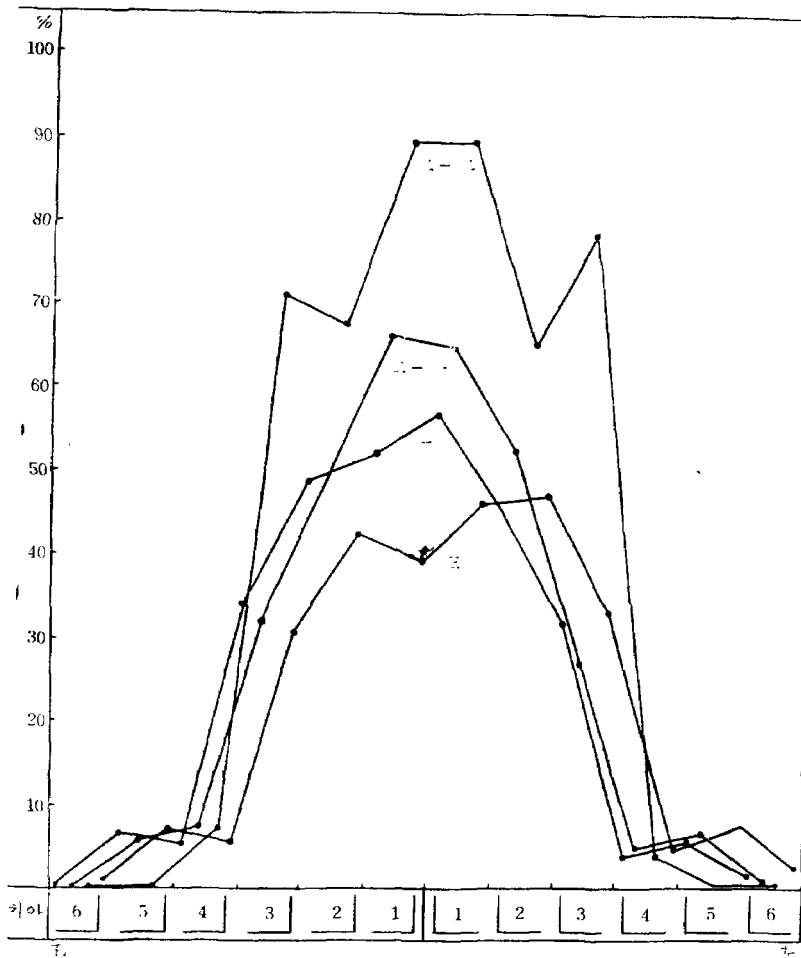


그림 1-1. 叢生齒 (上顎)

表 8. 交叉咬合 分布

類 形	發 生 人 數			男 子			女 子				
	Co	Co/T	Co/C	人 數	前 齒 部	臼 齒 部	人 數	前 齒 部	臼 齒 部		
一級不正咬合 315	30	3.7%	9.5%	15	50.0%	10	50.0%	12	80.0%	5	33.3%
二級一類不正咬合 233	22	2.7%	9.4%	11	50.0%	2	18.2%	9	81.8%	1	81.8%
二級二類不正咬合 28	4	0.5%	14.3%	3	75.0%	0	0%	1	25.0%	0	0%
三級不正咬合 227	125	15.6%	55.1%	72	57.6%	68	94.4%	20	27.8%	51	96.2%
不正咬合者總數 803	181	22.5%		101	55.8%	80	79.2%	39	38.6%	80	44.2%

$X^2=19.8$ $df(3)$ $p<0.01$

Co: 類形別發生人數 T: 不正咬合者總數 C: 類形別不正咬合者數

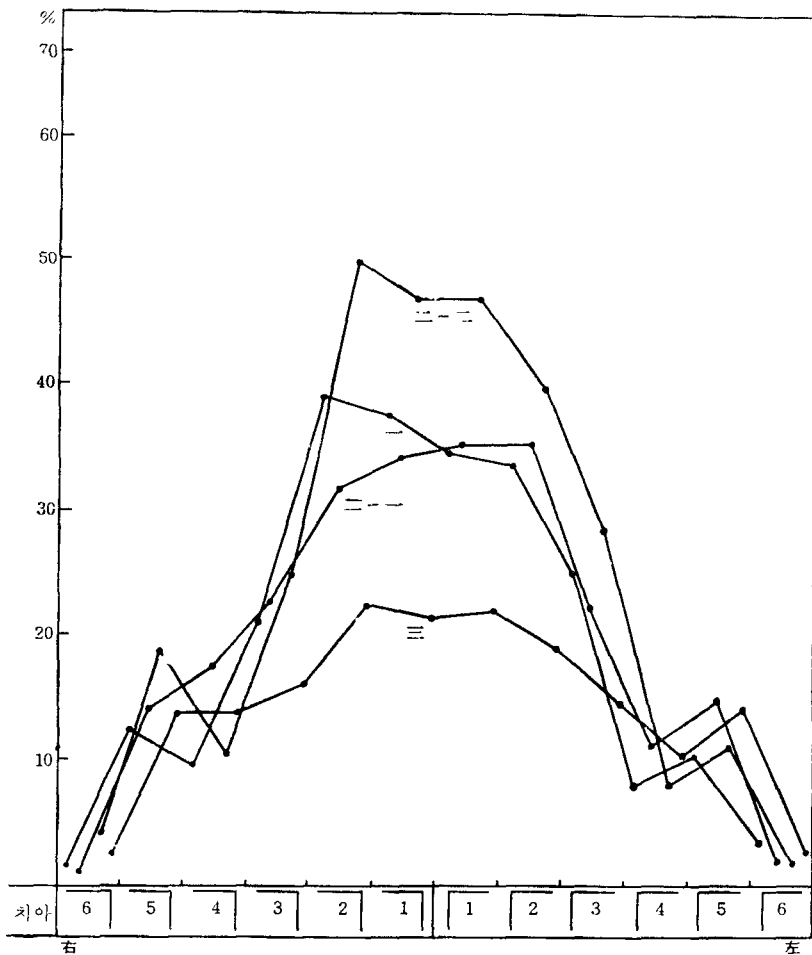


그림 1-2. 叢生齒 (下顎)

表 9. 切端咬合 分布

類 形	發 生 人 數			男 子			女 子								
	E	E/T	E/C	人 數	前 齒 部	臼 齒 部	人 數	前 齒 部	臼 齒 部						
一級不正咬合	41	5.1%	13.0%	16	39.0%	12	75.0%	7	43.8%	25	61.0%	20	80.0%	6	24.0%
二級一類不正咬合	22	2.7%	9.4%	10	45.5%	4	40.0%	7	70.0%	12	54.5%	5	41.7%	9	75.0%
二級二類不正咬合	3	0.4%	10.7%	0	0%	0	0%	0	0%	3	100%	0	0%	3	100%
三級不正咬合	98	12.2%	43.2%	52	53.1%	41	78.9%	22	42.3%	46	46.9%	31	67.4%	20	43.5%
不正咬合者總數	164	20.4%		78	47.6%	57	73.1%	36	46.1%	86	52.4%	56	65.1%	38	44.2%

$X^2=96.7$ df(3) $p<0.01$

E : 類形別發生人數 T : 不正咬合者總數 C : 類形別不正咬合者數

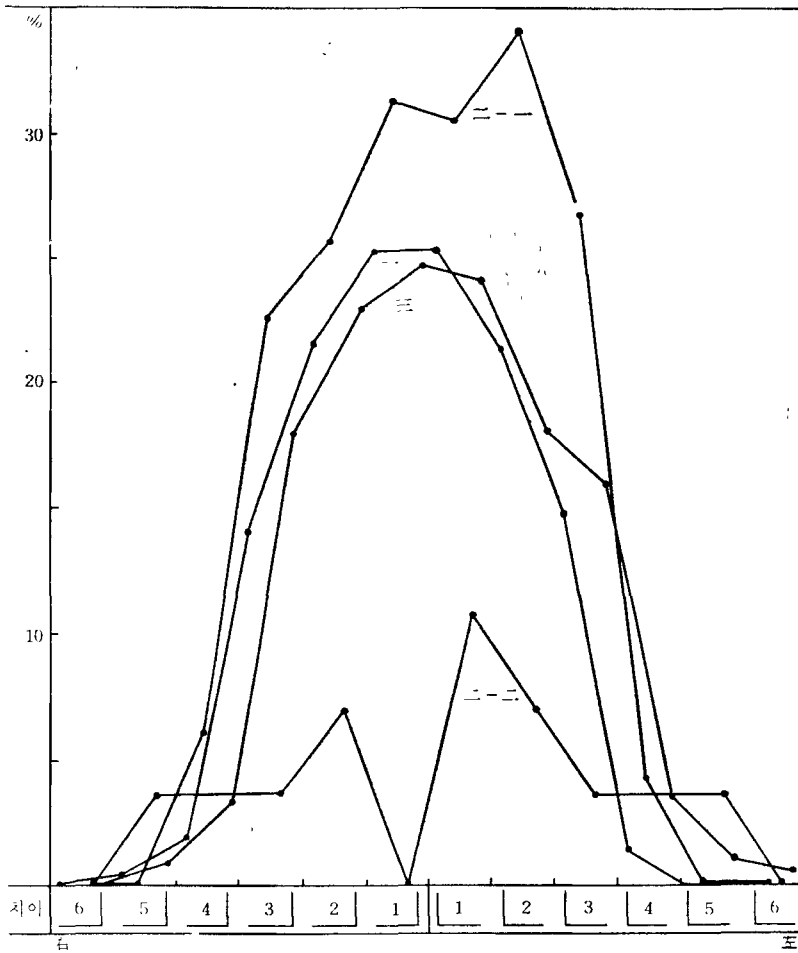


그림 2-1. 齒間離開齒 (下顎)

各 類形別 對比는 一級 9.5%(男子 50.0% 女子 50.0%), 二級一類는 9.4%(男子 50% 女子 50%), 二級二類는 14.3%(男子 75.0% 女子 25.0%), 三級은 55.1%(男子 57.6% 女子 42.4%)였고 二級二類는 모두 臼齒部에서만 나타났다. 前齒部와 臼齒部의 對比는 男子의 경우 前齒部 79.2%, 臼齒部가 38.6%, 女子는 前齒部 82.5%, 臼齒部는 43.8%로서 거의 二倍의 差를 보였다.

($X^2=19.8$ $df(3)$ $p<0.01$, 表 8 참조).

(8) 切端咬合(edge to edge bite)은 全體적으로 一級不正咬合이 5.1%, 二級一類가 2.7%, 二級二類는 0.4%, 三級은 12.2%로 總 20.4%(男子 47.6% 女子 52.4%)의 頻度를 보였다. 各 類形別 對比는 一級이 13.0%(男子 39.0% 女子 61.0%) 二級一類 9.4%(男子

45.5% 女子 54.5%), 二級二類 10.7%(男子 0% 女子 100%), 三級은 43.2%(男子 53.1% 女子 46.9%)로서 三級이 가장 높았다. 前齒部와 臼齒部의 對比는 男子는 前齒部가 73.1% 臼齒部가 46.1% 女子는 前齒部가 65.1% 臼齒部는 44.2%였다.

($X^2=96.7$ $df(3)$ $p<0.01$, 表 9 참조).

3. 個個齒牙의 不正樣相

(1) 叢生齒(crowding teeth)는 上顎의 左右中切齒는 57.2%, 53.8%의 높은 頻度를 보였으며 側切齒 犬齒까지의 前齒部는 30%以上の 頻度를 보인 反面에 小臼齒 大臼齒의 頻度는 매우 낮았다. 모든 類形에서 같은 順位였다. (그림 1-1, 1-2 참조)

下顎은 頻度差가 上顎보다 낮았으며 齒牙群으로 形成

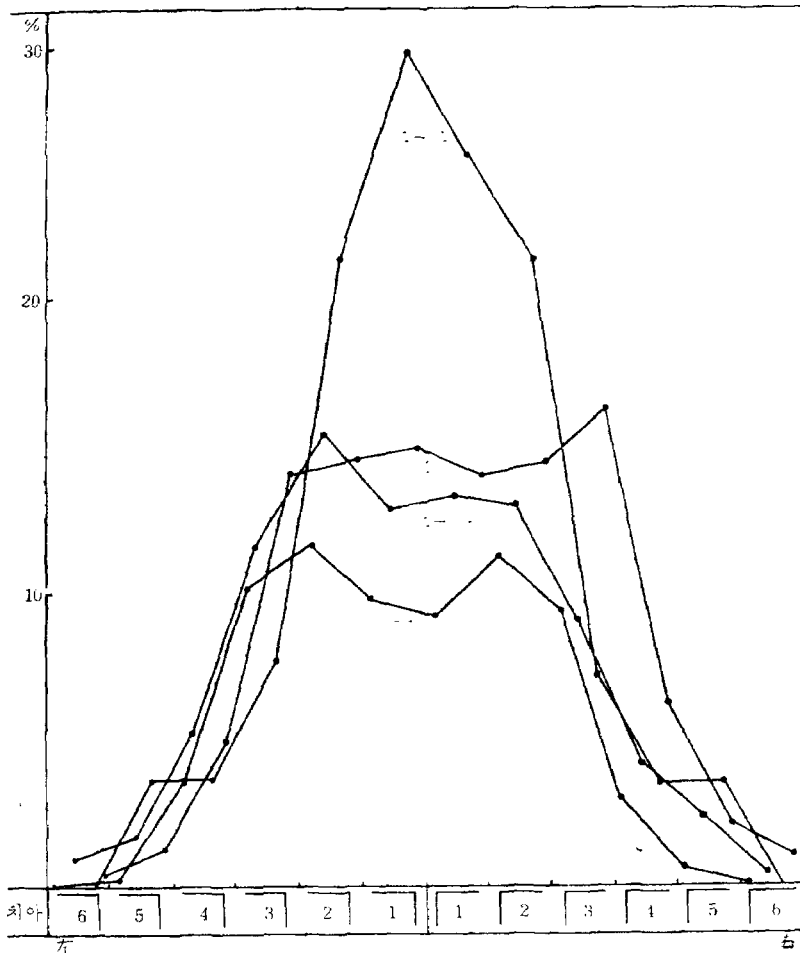


그림 2-2. 齒間離開齒 (上顎)

表 10 叢 生 齒

齒牙	類形 性別	一級不正咬合			二級一類不正咬合			二級二類不正咬合			三級不正咬合			齒牙合計 803
		133 男	182 女	315 合	104 男	129 女	233 合	13 男	15 女	28 合	105 男	122 女	227 合	
		上 顎 右 側	第一大白齒	0 0%	2 1.0%	2 0.6%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 1.0%	
	第二小白齒	10 7.5%	11 6.0%	21 6.7%	6 5.8%	7 5.4%	13 5.6%	0 0%	0 0%	0 0%	5 4.8%	10 8.2%	15 6.6%	49 6.1%
	第一小白齒	11 8.3%	6 3.3%	17 5.4%	7 6.7%	10 7.8%	17 7.3%	2 15.4%	0 0%	2 7.1%	9 8.6%	3 2.5%	12 5.3%	48 6.0%
	犬齒	58 43.6%	48 26.4%	106 33.7%	36 34.6%	38 29.5%	74 31.8%	10 76.9%	10 66.7%	20 71.4%	38 36.2%	32 26.2%	70 30.8%	270 33.6%
	側切齒	93 69.9%	60 33.0%	153 48.6%	66 63.5%	51 39.5%	117 50.2%	8 61.5%	11 73.3%	19 67.9%	52 49.5%	44 36.1%	96 42.3%	385 47.9%
	中切齒	85 63.9%	79 43.4%	164 52.1%	72 69.2%	154 63.6%	154 66.1%	13 100.0	12 80.0%	25 89.3%	41 39.0%	48 39.3%	89 39.2%	432 53.8%
上 顎 左 側	中切齒	106 79.7%	73 40.1%	179 56.8%	70 67.3%	81 62.8%	151 64.8%	12 92.3%	13 86.7%	25 89.3%	53 50.5%	51 41.8%	104 45.8%	459 57.2%
	側切齒	88 66.2%	53 29.1%	141 44.8%	61 58.7%	61 47.3%	122 52.4%	8 61.5%	10 66.7%	18 64.3%	62 59.0%	44 36.1%	106 46.7%	387 48.2%
	犬齒	63 47.3%	37 20.3%	100 31.7%	31 29.8%	31 24.0%	62 26.6%	10 76.9%	12 80.0%	22 78.6%	43 41.0%	32 26.2%	75 33.0%	259 32.3%
	第一小白齒	6 4.5%	5 2.7%	11 3.5%	3 2.9%	8 6.2%	11 4.7%	1 7.7%	0 0%	1 3.6%	5 4.8%	5 4.1%	10 4.4%	33 4.1%
	第二小白齒	6 4.5%	11 6.8%	17 5.4%	9 8.7%	6 4.7%	15 6.4%	0 0%	0 0%	0 0%	10 9.5%	7 5.7%	17 7.5%	49 6.1%
	第一大白齒	1 0.8%	3 1.6%	4 1.3%	0 0%	2 1.6%	2 0.9%	0 0%	0 0%	0 0%	3 2.9%	2 1.6%	5 2.2%	11 1.4%
	齒牙總數比	527 33.0%	388 17.8%	915 24.2%	361 28.9%	377 23.4%	738 26.4%	74 47.4%	58 32.2%	132 39.3%	322 25.6%	279 19.1%	601 22.1%	2,386 24.8%

$X^2=1,853.3$ df(11) $p<0.01$

下 顎 右 側	第一大白齒	1 0.8%	3 1.6%	4 1.3%	1 1.0%	1 0.8%	2 0.9%	0 0%	1 6.7%	1 3.6%	3 2.9%	2 1.6%	5 2.2%	12 1.5%
	第二小白齒	22 16.5%	16 8.8%	38 12.1%	17 16.3%	17 11.6%	32 13.7%	4 30.8%	1 6.7%	5 17.9%	14 13.3%	16 13.1%	30 13.2%	105 13.1%
	第一小白齒	18 13.5%	13 7.1%	31 9.8%	12 11.5%	27 20.9%	39 16.7%	1 7.7%	2 13.3%	3 10.7%	16 15.2%	14 11.5%	30 13.2%	103 12.8%
	犬齒	36 27.1%	31 17.0%	67 21.3%	19 18.3%	33 25.6%	52 22.3%	3 23.1%	4 26.7%	7 25.0%	10 9.5%	23 18.9%	33 14.5%	159 19.8%
	側切齒	70 52.6%	51 28.0%	121 38.4%	31 29.8%	43 33.3%	74 31.8%	6 46.2%	8 53.3%	14 50.0%	19 18.1%	32 26.2%	51 22.5%	260 32.4%
	中切齒	70 52.6%	46 25.3%	116 36.9%	40 38.5%	38 29.5%	78 33.5%	5 38.5%	8 58.3%	13 46.4%	18 17.1%	31 25.4%	49 21.6%	256 31.9%
下 顎 左 側	中切齒	57 42.9%	50 27.5%	107 34.0%	43 41.3%	39 30.2%	82 35.2%	4 30.8%	9 60.0%	13 46.4%	22 21.0%	28 23.0%	50 22.0%	252 31.4%
	側切齒	60 45.1%	45 24.7%	105 33.3%	37 35.6%	45 34.9%	82 35.2%	3 23.1%	8 53.3%	11 39.3%	23 21.9%	19 15.6%	42 18.5%	240 29.9%
	犬齒	46 34.6%	32 17.6%	78 24.8%	15 14.4%	29 22.5%	44 18.9%	3 23.1%	5 33.3%	8 28.6%	11 10.5%	21 17.2%	32 14.1%	162 20.2%
	第一小白齒	13 9.8%	16 8.8%	29 8.3%	9 8.7%	18 14.0%	27 11.6%	2 15.4%	0 0%	2 7.1%	9 8.6%	14 11.5%	23 10.1%	81 10.1%
	第二小白齒	11 8.3%	22 12.1%	33 10.5%	18 17.3%	16 12.4%	34 14.6%	3 23.0%	0 0%	3 10.7%	18 17.1%	13 10.7%	31 13.7%	101 12.5%
	第一大白齒	6 4.5%	0 0%	6 3.3%	3 2.9%	1 0.8%	4 1.7%	0 0%	1 6.7%	1 3.6%	4 3.8%	2 1.6%	6 2.6%	17 2.0%
	齒牙總數比	410 25.7%	325 14.9%	735 19.4%	245 19.6%	305 19.7%	550 19.7%	34 21.8%	47 26.1%	81 24.1%	167 13.3%	155 14.7%	382 14.0%	1,748 18.1%

$X^2=656.4$ df(11) $p<0.01$ 上·下 $\frac{4,134}{19,272}=21.5\%$

表 11 齒 間 離 開 齒

齒牙	類形 性別	一級不正咬合			二級一類不正咬合			二級二類不正咬合			三級不正咬合			齒牙合計 803
		132	182	315	104	129	233	13	15	28	105	122	227	
		男	女	合	男	女	合	男	女	合	男	女	合	
上 顎 右 側	第一大白齒	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
	第二小白齒	0 0%	1 0.5%	1 0.3%	0 0%	0 0%	0 0%	1 7.6%	0 0%	1 3.6%	1 1.0%	1 0.8%	2 0.9%	4 0.5%
	第一小白齒	1 0.8%	5 2.7%	6 1.9%	4 3.8%	10 7.8%	14 6.0%	1 7.6%	0 0%	1 3.6%	5 4.8%	3 2.5%	8 3.5%	29 3.6%
	犬齒	18 13.5%	26 14.3%	44 14.0%	33 31.7%	20 15.5%	53 22.7%	1 7.6%	0 0%	1 3.6%	14 11.5%	27 22.1%	41 18.1%	139 17.3%
	側切齒	32 24.1%	36 19.8%	68 21.6%	33 31.7%	27 20.9%	60 25.8%	2 15.4%	0 0%	2 7.1%	16 15.2%	36 29.5%	52 22.9%	182 22.7%
	中切齒	29 21.4%	51 28.0%	80 25.4%	29 27.9%	44 34.1%	73 31.3%	0 0%	0 0%	0 0%	19 18.1%	37 30.3%	56 24.7%	209 26.0%
上 顎 左 側	中切齒	31 23.3%	49 26.9%	80 25.4%	27 26.0%	44 34.1%	71 30.5%	3 23.1%	0 0%	3 10.7%	19 18.1%	36 29.5%	55 24.2%	209 26.0%
	側切齒	32 24.1%	35 19.2%	67 21.3%	26 25.0%	54 41.9%	80 34.3%	2 15.4%	0 0%	2 7.1%	10 9.5%	31 25.4%	41 18.1%	190 23.7%
	犬齒	20 15.0%	26 14.3%	46 14.6%	22 29.8%	42 24.0%	64 26.6%	1 7.6%	0 0%	1 3.6%	13 12.4%	23 18.9%	36 15.9%	147 18.3%
	第一小白齒	3 2.3%	1 0.5%	4 1.3%	4 3.8%	6 4.7%	10 4.3%	1 7.6%	0 0%	1 3.6%	1 1.0%	7 5.7%	8 3.5%	23 2.9%
	第二小白齒	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 7.6%	0 0%	1 3.6%	1 1.0%	1 0.8%	2 0.9%	3 0.4%
	第一大白齒	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 1.0%	1 0.9%	0 0%	1 0.4%	1 0.1%
齒牙總數比		166 10.4%	230 10.5%	396 10.5%	178 14.3%	247 16.0%	425 15.2%	13 8.3%	0 0%	13 3.9%	100 7.9%	202 13.8%	302 11.1%	1,136 11.8%

$X^2 = 323.5$ $df(11)$ $p < 0.01$

下 顎 右 側	第一大白齒	0 0%	0 0%	0 0%	0 0%	2 1.6%	2 0.9%	0 0%	0 0%	0 0%	0 0%	1 0.8%	1 0.4%	3 0.4%
	第二小白齒	0 0%	1 0.5%	1 0.3%	1 1.0%	3 2.3%	4 1.7%	1 7.6%	0 0%	1 3.6%	1 1.0%	2 1.6%	3 1.3%	9 1.1%
	第一小白齒	2 1.5%	9 4.9%	11 3.5%	3 3.9%	9 7.0%	12 5.2%	1 7.6%	0 0%	1 3.6%	5 4.8%	6 4.9%	11 4.8%	35 4.4%
	犬齒	12 9.0%	20 11.0%	32 10.2%	11 10.6%	16 12.4%	27 11.6%	1 7.6%	1 6.7%	2 7.1%	12 11.4%	19 15.6%	31 13.7%	92 11.5%
	側切齒	19 14.3%	18 9.9%	37 11.7%	17 16.3%	19 14.7%	36 15.5%	2 15.4%	4 26.7%	6 21.4%	13 12.4%	20 16.4%	33 14.5%	112 13.9%
	中切齒	17 12.8%	14 7.7%	31 9.8%	14 13.5%	16 12.4%	30 12.9%	4 30.8%	4 26.7%	8 28.6%	10 9.5%	24 19.7%	34 15.0%	103 12.8%
下 顎 左 側	中切齒	16 12.0%	13 7.1%	29 9.2%	14 14.5%	17 13.2%	31 13.3%	4 30.8%	3 20.0%	7 25.0%	13 12.4%	19 15.6%	32 14.1%	99 12.3%
	側切齒	21 15.8%	15 8.2%	36 11.4%	14 13.5%	16 12.4%	30 12.9%	3 23.1%	3 20.0%	6 21.4%	14 13.3%	19 15.6%	33 14.5%	105 13.1%
	犬齒	13 9.8%	17 9.3%	30 9.5%	10 9.6%	11 8.5%	21 9.0%	1 7.6%	1 6.7%	2 7.1%	17 16.2%	20 16.4%	37 16.3%	90 11.2%
	第一小白齒	0 0%	9 6.8%	9 2.9%	3 2.9%	7 5.4%	10 4.3%	1 7.6%	0 0%	1 3.6%	5 4.8%	9 7.4%	14 6.2%	34 4.2%
	第二小白齒	1 0.8%	1 0.5%	2 0.6%	1 1.0%	5 3.8%	6 2.5%	1 7.6%	0 0%	1 3.6%	1 1.0%	4 3.3%	5 2.1%	14 1.7%
	第一大白齒	0 0%	0 0%	0 0%	0 0%	1 0.8%	1 0.4%	0 0%	0 0%	0 0%	0 0%	0 1.6%	2 0.9%	3 0.4%
齒牙總數比		101 6.3%	117 5.4%	218 5.8%	88 7.1%	122 7.9%	210 7.5%	19 12.2%	16 8.9%	35 10.4%	91 7.2%	145 9.9%	236 8.7%	699 7.3%

$X^2 = 335.8$ $df(11)$ $p < 0.01$ 上 · 下 $\frac{1,835}{19,272} = 9.5\%$

되는 叢生齒列의 研究成績과 比較하면 個個의 叢生齒는 二級二類, 二級一類, 一級, 三級の 順으로 中切齒 側切齒 犬齒의 頻度가 높았다. 上顎에서 類度는 다르지만 같은 順位였다. 下顎에서 中切齒는 左側 31.4%, 右側 31.9%, 側切齒는 左側 29.9%, 右側 32.4%, 犬齒는 左側 20.2%, 右側 19.8%, 第一小白齒는 左側 10.1%, 右側 12.8%, 第二小白齒는 左側 12.5%, 右側 13.1% 大白齒는 左側 2.0%, 右側 1.5%로서 總 18.1%의 頻度를 보였고 上顎은 總 24.8%의 頻度를 보였다. (上顎, $X^2=1,853.3$ $df(11)$ $p<0.01$, 下顎, $X^2=656.4$ $df(11)$ $p<0.01$, 表10참조).

(2) 齒間離開齒(spacing teeth)는 上下顎 모두 前齒部의 頻度가 크고 臼齒部는 낮았다. 上顎의 頻度는 11.

8% 下顎은 7.3%였다. 上顎에서 中切齒는 左右 共히 26.0%, 側切齒는 左側 23.7%, 右側 22.7%, 犬齒는 左側 18.3%, 右側 17.3%, 第一小白齒는 左側 2.9% 右側 3.6%, 第二小白齒는 左側 0.4% 右側 0.5%, 第一大白齒는 左側 0.1% 右側 0%의 頻度를 보였으며 二級二類不正咬合에서 中切齒는 左側 10.7%, 右側 0%였고 側切齒, 犬齒, 小白齒, 大白齒는 같은 分布였으나 男子에서만 빈도를 보였고 女子에서는 全體적으로 빈도를 보이지 않았다. 下顎에서 中切齒는 左側 12.3%, 右側 12.8%, 側切齒는 左側 13.1%, 右側 13.9%, 犬齒는 左側 11.2%, 右側 11.5%, 第一小白齒는 左側 4.2%, 右側 4.4%, 第二小白齒는 左側 1.7%, 右側 1.1%, 第一大白齒는 左側 0.4%, 右側 0.4%를 보였으며 二級二類의 中切齒와 側

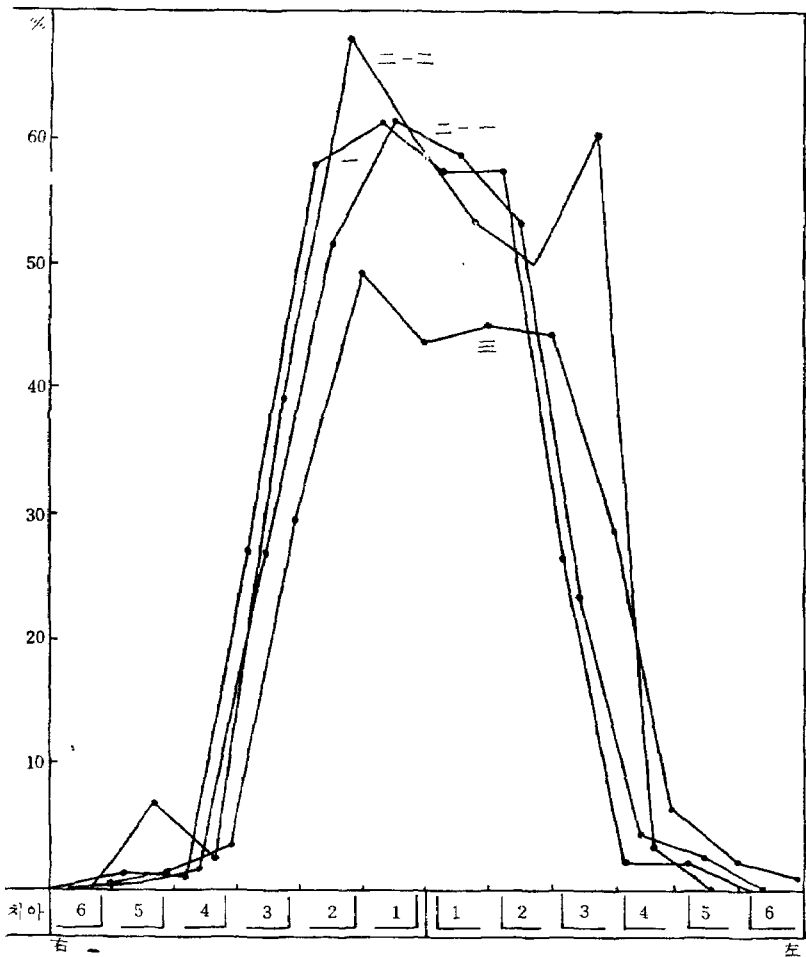


그림 3-1. 回轉齒 (上顎)

切齒의 頻度는 上顎과 比較해서 높았으며 男女間의 差는 크지 않았다. 上下顎 모든 齒牙의 齒間離開 頻度는 9.5%였다. (上顎, $X^2=323.5$ $df(11)$ $p<0.01$, 下顎, $X^2=335.8$ $df(11)$ $p<0.01$, 表11과 그림 2-1, 2-2 참조).

(3) 回轉齒(rotating teeth)는 上顎에서 23.5%의 頻度를 보였으며 中切齒는 左側 54.2%, 右側 56.3% 側切齒는 左側 52.4%, 右側 53.9%, 犬齒는 左側 27.1%, 右側 28.3%, 第一小白齒는 左側 4.1%, 右側 2.0%, 第二小白齒는 左側 2.1%, 右側 1.2%, 第一大臼齒는 左側 0.2%, 右側 0.1%였으며 類形別로는 三級不正咬合의 中切齒와 側切齒의 頻度가 他類形에 比較해서 낮았으며 下顎에서는 18.0%의 頻度를 보였으며 中切齒는 左側 42.5% 右側 42.1%, 側切齒는 左側 35.5%, 右側 36.4%, 犬齒

는 左側 20.7%, 右側 23.2%, 第一小白齒는 左側 4.1%, 右側 3.7%, 第二小白齒는 左側 3.4%, 右側 2.2%, 第一大臼齒는 左側 1.1%, 右側 1.1%였으며 三級不正咬合의 中切齒와 側切齒가 돌보였다. 男女間의 有意差는 認定할 수 없었다. 上下顎 모든 齒牙의 回轉齒의 頻度는 20.8%였다. (上顎, $X^2=2295.3$ $df(11)$ $p<0.01$, 下顎, $X^2=1340.0$ $df(11)$ $p<0.01$, 表12와 그림 3-1, 3-2 참조).

(4) 開咬咬合齒(openbite teeth or underbite teeth)는 上顎에서 8.3%였으며 中切齒는 左側 14.6%, 右側 15.3%, 側切齒는 左側 10.7%, 右側 11.1%, 犬齒는 左側 18.8%, 右側 20.7%, 第一小白齒는 左側 2.6%, 右側 1.4%, 第二小白齒는 左側 2.5%, 右側 1.6%, 第一大臼齒는 左側 0.2%, 右側 0.1%였으며 二級二類不正咬合에

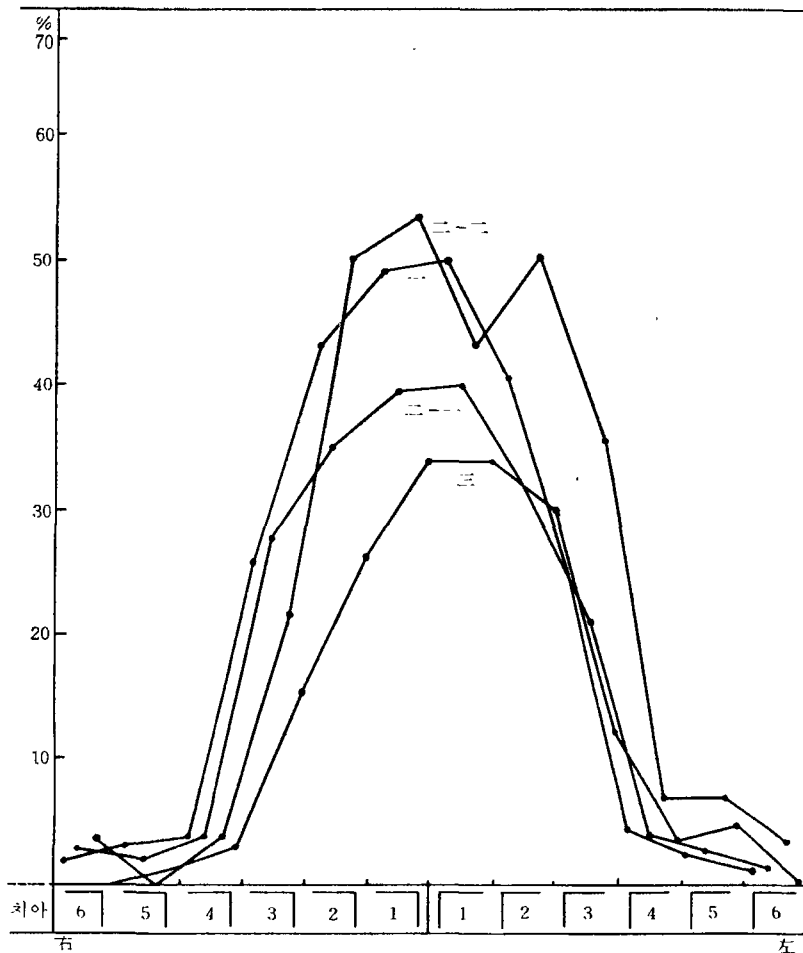


그림 3-2. 回轉齒 (下顎)

表 12 回 轉 齒

齒牙	類形	性別		一級不正咬合			二級一類不正咬合			二級二類不正咬合			三級不正咬合			齒牙合計 803
		男	女	133	182	315	104	129	233	13	15	28	105	122	227	
		男	女	合	男	女	合	男	女	合	男	女	合			
上 顎 右 側	第一大白齒	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 0.8%	1 0.4%	1 0.1%	
	第二小白齒	3 2.3%	1 0.5%	4 1.3%	1 1.0%	0 0%	1 0.4%	2 15.4%	0 0%	2 7.1%	0 0%	3 2.5%	3 1.3%	10 1.2%		
	第一小白齒	2 1.5%	1 0.5%	3 1.0%	2 1.9%	2 1.6%	4 1.7%	0 0%	1 6.7%	1 3.6%	3 2.9%	5 4.1%	8 3.5%	16 2.0%		
	犬齒	47 35.3%	38 20.9%	85 27.0%	27 26.0%	36 27.9%	63 27.0%	3 23.1%	8 53.3%	11 39.3%	39 37.1%	29 23.8%	68 30.0%	227 28.3%		
	側切齒	94 70.7%	88 48.4%	182 57.8%	58 55.8%	62 48.1%	120 51.5%	8 51.5%	11 73.3%	19 57.9%	61 58.1%	51 41.8%	112 49.3%	433 53.9%		
	中切齒	100 75.2%	93 51.1%	193 61.3%	60 57.7%	83 64.3%	143 61.4%	6 46.2%	11 73.3%	17 60.7%	49 46.7%	50 41.0%	99 43.6%	452 56.3%		
上 顎 左 側	中切齒	95 71.4%	86 47.3%	181 57.5%	59 56.7%	78 60.5%	137 58.8%	5 38.5%	10 66.7%	15 53.6%	49 46.7%	53 43.4%	102 44.9%	435 54.2%		
	側切齒	96 72.2%	85 46.7%	181 57.5%	55 52.9%	70 54.3%	125 53.4%	7 53.8%	7 46.7%	14 50.0%	47 44.8%	54 44.3%	101 44.4%	421 52.4%		
	犬齒	44 33.1%	38 20.9%	82 26.0%	23 22.1%	31 24.0%	54 23.2%	8 61.5%	9 60.0%	17 60.7%	34 32.4%	31 25.4%	65 28.6%	218 27.1%		
	第一小白齒	3 2.3%	4 2.2%	7 2.2%	7 6.7%	3 2.3%	10 4.5%	1 7.6%	0 0%	1 3.6%	9 8.6%	6 4.9%	15 6.6%	33 4.1%		
	第二小白齒	3 2.3%	3 1.6%	6 1.9%	3 2.9%	3 2.3%	6 2.7%	0 0%	0 0%	0 0%	2 1.9%	3 2.5%	5 2.2%	17 2.1%		
	第一大白齒	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 1.0%	1 0.8%	2 0.9%	2 0.2%		
齒牙總數比	490 30.7%	434 19.9%	924 34.4%	295 23.6%	368 23.8%	663 23.7%	40 25.6%	57 31.7%	97 28.9%	294 23.3%	287 19.6%	581 21.3%	2,665 33.5%			

$X^2 = 2,295.2$ $df(11)$ $p < 0.01$

下 顎 右 側	第一大白齒	5 3.8%	1 0.5%	6 1.9%	1 1.0%	1 0.8%	2 0.9%	0 0%	1 6.7%	1 3.6%	0 0%	0 0%	0 0%	9 1.1%
	第二小白齒	4 3.0%	6 3.3%	10 3.2%	2 1.9%	3 2.3%	5 2.1%	0 0%	0 0%	0 0%	2 1.9%	1 0.8%	3 1.3%	18 2.2%
	第一小白齒	9 6.8%	4 2.2%	13 4.1%	0 0%	9 7.0%	9 3.9%	1 7.6%	0 0%	1 3.6%	4 3.8%	3 2.5%	7 3.0%	30 3.7%
	犬齒	37 27.8%	44 34.2%	81 25.7%	30 28.8%	34 26.4%	64 27.5%	1 7.6%	5 33.3%	6 21.4%	15 14.3%	20 16.4%	35 15.4%	186 23.2%
	側切齒	65 48.9%	71 39.0%	136 43.2%	36 34.6%	46 35.7%	82 35.2%	7 53.8%	7 46.7%	14 50.0%	28 26.7%	32 26.2%	60 26.4%	292 36.4%
	中切齒	79 59.4%	75 41.2%	154 48.9%	33 31.7%	59 45.7%	92 39.5%	7 53.8	8 53.3%	15 53.6%	31 29.5%	46 37.7%	77 33.9%	338 42.1%
下 顎 左 側	中切齒	78 58.6%	80 44.0%	158 50.2%	36 34.6%	58 45.0%	94 40.3%	5 38.5%	7 46.7%	12 42.9%	31 29.5%	46 37.7%	77 33.9%	341 42.5%
	側切齒	67 50.4%	61 33.7%	128 40.6%	34 32.7%	41 31.8%	75 32.2%	7 53.9%	7 46.7%	14 50.0%	39 32.4%	29 23.8%	68 30.0%	285 35.5%
	犬齒	38 28.6%	41 22.5%	79 25.1%	27 26.0%	22 17.2%	49 21.0%	5 38.5%	5 33.3%	10 35.7%	14 13.3%	14 11.5%	28 12.3%	166 20.7%
	第一小白齒	12 9.0%	2 1.1%	14 4.4%	3 2.9%	6 4.7%	9 3.9%	1 7.6%	1 6.7%	2 7.1%	4 3.8%	4 3.3%	8 3.5%	33 4.1%
	第二小白齒	6 4.5%	2 1.1%	8 2.5%	3 2.9%	3 2.3%	6 2.7%	1 7.6%	1 6.7%	2 7.1%	3 2.9%	3 6.6%	8 4.8%	27 3.4%
	第一大白齒	0 0%	4 2.2%	4 1.3%	1 1.0%	2 1.6%	3 1.3%	0 0%	1 6.7%	1 3.6%	1 1.0%	0 0%	1 0.4%	9 1.1%
齒牙總數比	490 25.1%	391 17.9%	791 20.9%	206 16.5%	284 18.3%	490 17.5%	35 22.4%	43 23.9%	78 23.2%	172 13.7%	203 13.9%	375 13.8%	1,734 18.0%	

$X^2 = 1,340.3$ $df(11)$ $p < 0.01$ 上・下 $\frac{3,999}{19,272} = 20.8\%$

表 13 開 咬 咬 合 齒

齒牙	類形 性別	一級不正咬合			二級一類不正咬合			二級二類不正咬合			三級不正咬合			齒牙合計 803
		133	182	315	104	129	233	13	15	23	105	122	227	
		男	女	合	男	女	合	男	女	合	男	女	合	
上 顎	第一大臼齒	0 0%	0 0%	0 0%	0 0%	1 0.8%	1 0.4%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 0.1%
	第二小臼齒	1 0.8%	1 0.5%	2 0.6%	3 2.9%	0 0%	3 1.3%	0 0%	0 0%	0 0%	6 5.7%	2 1.6%	8 3.5%	13 1.6%
	第一小臼齒	2 1.5%	0 0%	2 0.6%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	5 4.8%	4 3.3%	9 4.0%	11 1.4%
	犬齒	45 33.8%	39 21.4%	84 26.7%	20 19.2%	19 14.7%	39 16.7%	2 15.4%	2 13.3%	4 14.3%	26 24.7%	13 10.7%	39 17.2%	166 20.7%
	側切齒	12 9.0%	11 6.0%	23 7.3%	16 15.4%	11 8.5%	27 11.6%	0 0%	11 73.3%	11 39.3%	8 7.6%	20 16.4%	28 12.3%	89 11.1%
	中切齒	22 16.5%	23 12.6%	45 14.2%	20 19.2%	25 19.4%	45 20.2%	0 0%	0 0%	0 0%	9 8.6%	24 19.7%	33 14.5%	123 15.3%
右 側	中切齒	24 18.0%	16 8.8%	40 12.7%	19 18.4%	26 20.2%	45 19.3%	0 0%	0 0%	0 0%	13 12.4%	19 15.6%	32 14.1%	117 14.6%
	側切齒	16 12.0%	9 0.5%	25 7.9%	15 14.4%	13 10.1%	28 12.0%	0 0%	1 6.7%	1 3.6%	16 15.2%	16 13.1%	32 14.1%	86 10.7%
	犬齒	41 30.8%	32 17.6%	73 23.2%	17 16.3%	18 14.0%	35 15.0%	3 23.1%	2 13.3%	5 17.9%	20 19.0%	18 14.8%	38 16.7%	151 18.8%
	第一小臼齒	4 2.9%	1 0.5%	5 1.6%	1 1.0%	3 2.3%	4 1.7%	0 0%	0 0%	0 0%	7 6.7%	5 4.1%	12 5.4%	21 2.6%
	第二小臼齒	4 2.9%	1 0.5%	5 1.6%	0 0%	0 0%	0 0%	1 7.6%	0 0%	1 3.6%	8 7.6%	6 4.9%	14 6.2%	20 2.5%
	第一大臼齒	1 0.8%	0 0%	1 0.3%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 0.8%	1 0.4%	2 0.2%
齒牙總數比	172 10.8%	133 6.1%	395 8.1%	111 8.9%	116 7.5%	227 8.1%	6 3.8%	16 8.9%	22 6.5%	118 9.4%	128 8.7%	246 9.0%	800 8.3%	

$X^2=545.5$ $df(11)$ $p<0.01$

下 顎	第一大臼齒	0 0%	0 0%	0 0%	0 0%	1 0.8%	1 0.4%	0 0%	0 0%	0 0%	1 1.0%	0 0%	1 0.4%	2 0.2%
	第二小臼齒	1 0.8%	1 0.5%	2 0.6%	3 2.9%	1 0.8%	4 1.7%	0 0%	0 0%	0 0%	6 5.7%	3 2.5%	9 4.0%	15 1.9%
	第一小臼齒	4 2.9%	1 0.5%	5 1.6%	1 1.0%	1 0.8%	2 0.9%	0 0%	0 0%	0 0%	9 8.6%	4 3.3%	13 5.7%	20 2.5%
	犬齒	35 26.3%	33 18.1%	68 21.6%	15 14.4%	14 10.9%	29 12.4%	2 15.4%	2 13.3%	4 14.3%	15 14.3%	16 13.1%	31 13.7%	132 16.4%
	側切齒	13 9.8%	13 7.1%	26 8.3%	16 15.4%	11 8.5%	27 11.6%	1 7.6%	1 6.7%	2 7.1%	11 10.5%	20 16.4%	31 13.7%	86 10.7%
	中切齒	20 15.0%	21 11.5%	41 22.5%	20 19.2%	21 16.3%	41 17.6%	0 0%	0 0%	0 0%	11 10.5%	22 18.0%	33 14.5%	115 14.3%
右 側	中切齒	23 17.3%	15 8.2%	38 12.1%	19 18.3%	24 18.6%	43 18.5%	0 0%	0 0%	0 0%	13 12.4%	20 16.4%	33 14.5%	114 14.2%
	側切齒	17 12.8%	11 6.0%	28 8.9%	15 14.4%	14 10.9%	29 12.4%	1 7.6%	1 6.7%	2 7.1%	16 15.2%	18 14.8%	34 14.9%	93 11.6%
	犬齒	33 24.8%	29 15.9%	62 19.7%	15 14.4%	20 15.5%	35 15.0%	3 23.1%	2 13.3%	5 17.8%	14 13.3%	19 15.6%	33 14.5%	135 16.8%
	第一小臼齒	5 3.8%	2 1.1%	7 2.2%	1 1.0%	1 0.8%	2 0.9%	0 0%	0 0%	0 0%	5 4.8%	8 6.6%	13 5.7%	22 2.7%
	第二小臼齒	3 2.3%	1 1.1%	4 1.3%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	8 7.6%	3 2.5%	11 4.8%	15 1.6%
	第一大臼齒	3 2.3%	0 0%	3 1.0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 1.0%	1 0.8%	2 0.9%	5 0.6%
齒牙總數比	157 9.8%	127 5.8%	284 7.5%	105 8.4%	108 7.0%	213 7.6%	7 4.5%	6 3.3%	13 3.9%	110 8.7%	134 9.2%	244 9.0%	754 7.8%	

$X^2=506.5$ $df(11)$ $p<0.01$ 上·下 $\frac{1,554}{19,272}=8.1\%$

表 14 交 叉 咬 合 齒

齒牙	類形 性別	一級不正咬合			二級一類不正咬合			二級二類不正咬合			三級不正咬合			齒牙合計 803
		133 男	182 女	315 合	104 男	129 女	233 合	13 男	15 女	28 合	105 男	122 女	227 合	
上 顎 右 側	第一大白齒	0 0%	3 1.6%	3 1.0%	2 1.9%	4 3.2%	6 2.6%	0 0%	0 0%	0 0%	3 2.9%	7 5.7%	10 4.4%	19 2.4%
	第二小白齒	12 9.0%	12 6.6%	24 7.6%	9 8.7%	17 13.2%	26 11.2%	5 38.5%	1 6.7%	6 21.4%	13 12.4%	10 8.2%	23 10.1%	79 9.8%
	第一小白齒	12 9.0%	7 3.8%	19 6.0%	8 7.6%	17 13.2%	25 10.7%	2 15.4%	0 0%	2 7.1%	2 12.4%	13 7.4%	9 9.7%	68 8.5%
	犬齒	4 3.0%	2 1.1%	6 1.9%	1 1.0%	2 1.6%	3 1.3%	0 0%	2 13.3%	2 7.1%	15 14.3%	23 18.9%	38 16.7%	49 6.1%
	側切齒	32 24.1%	18 9.9%	50 15.9%	8 7.7%	5 3.9%	13 5.6%	1 7.6%	1 6.7%	2 7.1%	53 50.5%	52 42.6%	105 46.3%	170 21.2%
	中切齒	2 1.5%	4 2.2%	6 1.9%	2 1.9%	0 0%	2 0.9%	0 0%	0 0%	0 0%	0 0%	43 41.0%	35 28.7%	78 34.7%
上 顎 左 側	中切齒	0 0%	5 2.7%	5 1.6%	1 1.0%	0 0%	1 0.4%	0 0%	0 0%	0 0%	40 38.1%	37 30.1%	77 33.9%	83 10.3%
	側切齒	24 18.0%	20 11.0%	44 14.0%	6 5.8%	6 4.7%	12 5.2%	1 7.6%	1 6.7%	2 7.1%	43 41.0%	49 40.2%	92 40.5%	150 18.7%
	犬齒	41 30.8%	32 17.6%	73 23.2%	17 16.3%	18 14.0%	35 15.0%	3 23.1%	2 13.3%	5 17.9%	20 19.0%	18 14.8%	38 16.7%	151 18.8%
	第一小白齒	6 4.5%	9 4.9%	15 4.8%	12 33.0%	4 3.1%	16 6.9%	2 15.4%	0 0%	2 7.1%	9 8.6%	20 16.4%	29 12.8%	62 7.7%
	第二小白齒	8 5.7%	12 6.6%	20 6.3%	16 15.4%	9 7.0%	25 10.7%	2 15.4%	1 6.7%	3 10.7%	11 10.5%	17 13.9%	28 12.3%	76 9.5%
	第一大白齒	2 1.5%	2 1.0%	4 1.3%	4 3.8%	3 2.3%	7 3.0%	0 0%	2 13.3%	2 7.1%	9 8.6%	10 8.2%	19 8.4%	32 4.0%
齒牙總數比	1,596 9.0%	2,184 5.8%	3,780 7.1%	1,248 6.9%	1,548 5.5%	2,796 6.1%	156 10.3%	180 5.6%	336 7.7%	1,260 21.6%	1,464 19.6%	2,724 20.5%	9,636 10.6%	

$X^2=296.5 \quad df(11) \quad p<0.01$

下 顎 右 側	第一大白齒	0 0%	3 1.6%	3 1.0%	2 1.9%	4 3.1%	6 2.6%	1 7.6%	0 0%	1 3.6%	7 6.7%	7 5.7%	14 6.2%	24 3.0%
	第二小白齒	13 9.8%	12 6.6%	25 7.9%	9 8.7%	17 13.2%	26 11.2%	5 38.5%	1 6.7%	6 21.4%	10 9.5%	10 8.2%	20 8.8%	77 9.6%
	第一小白齒	8 5.7%	7 3.8%	15 4.8%	9 8.7%	17 13.2%	26 11.2%	1 7.6%	0 0%	1 3.6%	15 14.3%	9 7.4%	24 10.6%	66 8.2%
	犬齒	23 17.3%	20 11.0%	43 13.7%	4 3.8%	6 4.7%	10 4.3%	0 0%	2 13.3%	2 7.1%	36 34.3%	41 33.6%	77 33.9%	132 16.4%
	側切齒	24 18.0%	26 14.3%	50 15.9%	4 3.8%	5 3.9%	9 3.9%	0 0%	3 20.0%	3 10.7%	53 50.5%	52 42.6%	105 46.3%	167 20.8%
	中切齒	2 1.5%	4 2.2%	6 1.9%	3 2.9%	0 0%	3 1.3%	0 0%	0 0%	0 0%	46 43.8%	35 28.7%	81 35.7%	90 11.2%
下 顎 左 側	中切齒	0 0%	5 2.7%	5 1.6%	1 1.0%	0 0%	1 0.4%	0 0%	0 0%	0 0%	29 27.6%	36 29.8%	65 28.6%	71 8.8%
	側切齒	19 14.3%	17 9.3%	36 19.8%	6 3.8%	6 4.7%	10 4.3%	0 0%	2 13.3%	2 7.1%	44 41.9%	46 37.7%	90 39.6%	138 17.2%
	犬齒	16 12.0%	14 7.7%	30 9.5%	3 2.9%	6 4.7%	9 3.9%	1 7.6%	1 6.7%	2 7.1%	29 27.6%	30 24.6%	59 26.0%	100 12.5%
	第一小白齒	7 5.3%	9 6.8%	16 5.1%	12 11.5%	3 2.3%	15 6.4%	2 15.4%	0 0%	2 7.1%	9 8.6%	18 14.8%	27 11.9%	60 7.5%
	第二小白齒	11 8.3%	13 7.1%	24 7.6%	16 15.4%	9 7.0%	25 10.7%	3 23.0%	1 6.7%	4 14.3%	10 9.5%	17 14.0%	27 11.9%	80 10.0%
	第一大白齒	2 1.2%	3 1.6%	5 1.6%	4 3.8%	3 2.3%	7 3.0%	2 15.4%	2 13.3%	4 14.3%	11 10.5%	10 8.2%	21 9.3%	37 4.6%
齒牙總數比	1,596 7.8%	2,184 6.1%	3,780 6.8%	1,248 5.7%	1,548 4.9%	2,796 5.3%	156 9.6%	180 6.7%	336 8.0%	1,260 23.7%	1,464 21.2%	2,724 22.4%	9,636 10.8%	

$X^2=220.4 \quad df(11) \quad p<0.01 \quad \text{上} \cdot \text{下} \frac{2,067}{19,272} = 10.7\%$

表 15 切 端 咬 合 齒

性別	類形	一級不正咬合			二級一類不正咬合			二級二類不正咬合			三級不正咬合			齒牙合計 803
		132	182	315	104	129	233	13	15	28	105	122	227	
		男	女	合	男	女	合	男	女	合	男	女	合	
上 顎 右 側	第一大白齒	3 2.3%	1 0.5%	4 1.3%	3 2.9%	4 3.2%	7 3.0%	0 0%	1 6.7%	1 3.6%	10 9.5%	18 14.8%	28 12.3%	40 5.0%
	第二小白齒	9 6.8%	4 2.2%	13 4.1%	4 3.8%	4 3.2%	8 3.4%	0 0%	2 13.3%	2 7.1%	12 11.4%	22 18.0%	34 15.0%	57 7.1%
	第一小白齒	8 6.0%	1 0.5%	9 2.9%	5 4.8%	6 4.7%	11 4.7%	0 0%	2 13.3%	2 7.1%	11 10.5%	20 16.4%	31 13.7%	53 6.6%
	犬齒	11 8.3%	6 3.3%	17 5.4%	2 1.9%	4 3.1%	6 2.6%	0 0%	2 13.3%	2 7.1%	25 23.8%	27 22.1%	52 22.9%	77 9.6%
	側切齒	25 18.8%	16 8.8%	41 13.0%	4 3.8%	6 4.7%	10 4.3%	0 0%	0 0%	0 0%	24 22.9%	20 16.4%	44 19.4%	95 11.8%
	中切齒	12 9.0%	9 4.9%	21 6.7%	3 2.9%	4 3.1%	7 3.0%	0 0%	0 0%	0 0%	31 29.5%	31 25.4%	62 27.3%	90 11.2%
上 顎 左 側	中切齒	10 7.5%	9 4.9%	19 6.0%	4 3.8%	3 2.3%	7 3.0%	0 0%	0 0%	0 0%	35 33.5%	31 25.4%	66 29.1%	92 11.5%
	側切齒	19 14.3%	19 10.4%	38 12.1%	4 3.8%	6 4.7%	10 4.3%	0 0%	0 0%	0 0%	24 22.9%	26 20.3%	50 22.0%	98 12.2%
	犬齒	7 5.3%	15 8.2%	22 7.0%	1 1.0%	2 1.6%	3 1.3%	0 0%	1 6.7%	1 3.6%	23 21.9%	21 17.2%	44 19.4%	70 8.7%
	第一小白齒	3 2.3%	8 4.4%	11 3.5%	4 3.8%	9 7.0%	13 5.6%	0 0%	1 6.7%	1 3.6%	14 13.4%	17 13.9%	31 13.7%	56 7.0%
	第二小白齒	6 4.5%	8 4.4%	14 4.4%	4 3.8%	7 5.4%	11 4.7%	0 0%	1 6.7%	1 3.6%	16 15.2%	16 13.1%	32 14.1%	58 7.2%
	第一大白齒	1 0.8%	2 1.1%	3 1.0%	4 3.8%	6 4.7%	10 4.3%	0 0%	0 0%	0 0%	9 8.6%	12 9.8%	21 9.3%	34 4.2%
齒牙總數比	114 7.1%	98 4.5%	212 5.6%	42 3.4%	61 3.9%	103 3.7%	0 0%	10 5.6%	10 3.0%	234 18.6%	261 17.8%	495 18.2%	820 8.5%	

$X^2=78.1$ df(11) $p<0.01$

下 顎 右 側	第一大白齒	3 2.3%	1 0.5%	4 1.3%	3 2.9%	4 3.1%	7 3.0%	0 0%	1 6.7%	1 3.6%	8 7.6%	20 16.4%	28 12.3%	40 5.0%
	第二小白齒	6 4.5%	4 2.2%	10 3.2%	4 3.8%	4 3.1%	8 3.4%	0 0%	2 13.3%	2 7.1%	13 10.7%	20 16.4%	33 14.5%	53 6.6%
	第一小白齒	7 5.3%	2 1.1%	9 2.9%	4 3.8%	6 4.7%	10 4.3%	0 0%	2 13.3%	2 7.1%	11 10.5%	12 18.0%	33 14.5%	54 6.7%
	犬齒	17 12.8%	11 6.0%	28 8.9%	4 3.8%	2 1.6%	6 2.6%	0 0%	0 0%	0 0%	27 25.7%	25 20.5%	52 22.9%	86 10.7%
	側切齒	21 15.8%	15 8.2%	36 11.4%	3 2.9%	3 2.3%	6 2.6%	0 0%	0 0%	0 0%	21 20.0%	24 19.7%	45 19.8%	87 10.8%
	中切齒	11 8.3%	8 4.4%	19 6.0%	3 2.9%	3 3.1%	6 3.0%	0 0%	0 0%	0 0%	33 30.5%	29 22.1%	62 26.0%	87 10.6%
下 顎 左 側	中切齒	11 8.3%	8 4.4%	19 6.0%	3 2.9%	3 2.3%	6 2.6%	0 0%	0 0%	0 0%	33 31.4%	29 23.8%	62 27.3%	87 10.8%
	側切齒	13 9.8%	18 9.9%	31 9.8%	5 4.8%	6 4.7%	11 4.7%	0 0%	0 0%	0 0%	19 18.1%	27 22.1%	46 20.3%	88 11.0%
	犬齒	13 9.8%	14 7.7%	27 8.6%	1 1.0%	4 3.1%	5 2.1%	0 0%	1 6.7%	1 3.6%	25 23.8%	27 22.1%	52 22.9%	85 10.6%
	第一小白齒	3 2.3%	7 3.8%	10 3.2%	4 3.8%	8 6.2%	12 5.2%	0 0%	1 6.7%	1 3.6%	14 13.3%	17 14.0%	31 13.7%	54 6.7%
	第二小白齒	4 2.9%	5 2.7%	9 4.9%	4 3.8%	16 12.4%	20 8.5%	0 0%	1 6.7%	1 3.6%	17 16.2%	16 13.1%	33 14.5%	63 7.8%
	第一大白齒	2 1.5%	2 1.1%	4 1.3%	4 3.8%	6 4.7%	10 4.3%	0 0%	0 0%	0 0%	8 7.6%	12 9.8%	20 8.8%	34 4.2%
齒牙總數比	111 7.0%	95 4.3%	206 5.4%	42 3.4%	66 4.3%	108 3.9%	0 0%	8 2.4%	8 0.6%	228 18.1%	266 18.2%	494 18.1%	816 8.5%	

$X^2=67.7$ df(11) $p<0.01$ 上·下 $\frac{1,636}{19.272}=8.5\%$

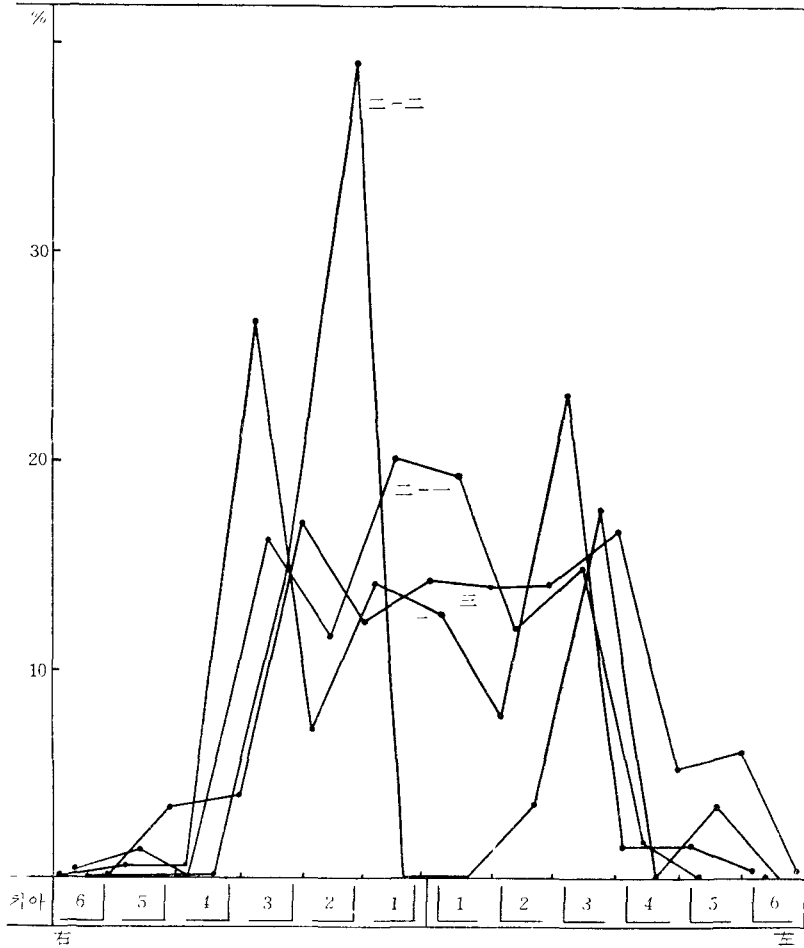


그림 4-1. 開咬 咬合齒 (上顎)

서는 右側 側切齒는 39.3%, 左側 側切齒는 3.6%의 頻度 差를 보인것은 特記할 事項이며 中切齒는 左右 모두 全無 하였다. 下顎에서는 總7.8%의 頻度を 보였으며 中切齒는 左側 14.2%, 右側 14.3%, 側切齒는 左側 11.6%, 右側 10.7%, 犬齒는 左側 16.8%, 右側 16.4%, 第一小白齒는 左側 2.7%, 右側 2.5%, 第二小白齒는 左側 1.6%, 右側 1.9%, 第一大臼齒는 左側 0.6%, 右側 0.2%였다. 二級 二類에서는 中切齒의 開咬咬合齒는 全無하였다. 上下顎 모든 齒牙의 8.1%가 開咬咬合齒였으며 男女間의 有意 差는 認定 할수없었다.

(上顎, $X^2=545.5$ df (11) $p<0.01$, 下顎, $X^2=526.5$ df (11) $p<0.01$, 表13과 그림 4-1, 4-2 참조).

(5) 交叉咬合齒(cross bite teeth)는 上顎의 頻도가

10.6%였으며 中切齒는 左側 10.3%, 右側 10.7%, 側切齒는 左側 18.7%, 右側 21.2%, 犬齒는 左側 18.8%, 右側 6.1%, 第一小白齒는 左側 7.7%, 右側 8.5%, 第二小白齒는 左側 9.5%, 右側 9.8%, 第一大臼齒는 左側 4.0%, 右側 2.4%였으며 三級不正咬合의 中切齒와 側切齒의 發生頻도와 他類形의 頻度는 比較할수없을 程度로 三級에서 높았다. 下顎은 10.8%의 頻度を 보여 上顎과 有 似하였다. 中切齒는 左側 8.8%, 右側 11.2%, 側切齒는 左側 17.2%, 右側 20.8%, 犬齒는 左側 12.5%, 右側 16.4%, 第一小白齒는 左側 7.5%, 右側 8.2%, 第二小白齒는 左側 10.0%, 右側 9.6%, 第一大臼齒는 左側 4.6%, 右側 3.0%였으며 三級不正咬合에서 中切齒, 側切齒, 犬齒의 頻도가 높았으며 二級二類의 中切齒는 全無하였으

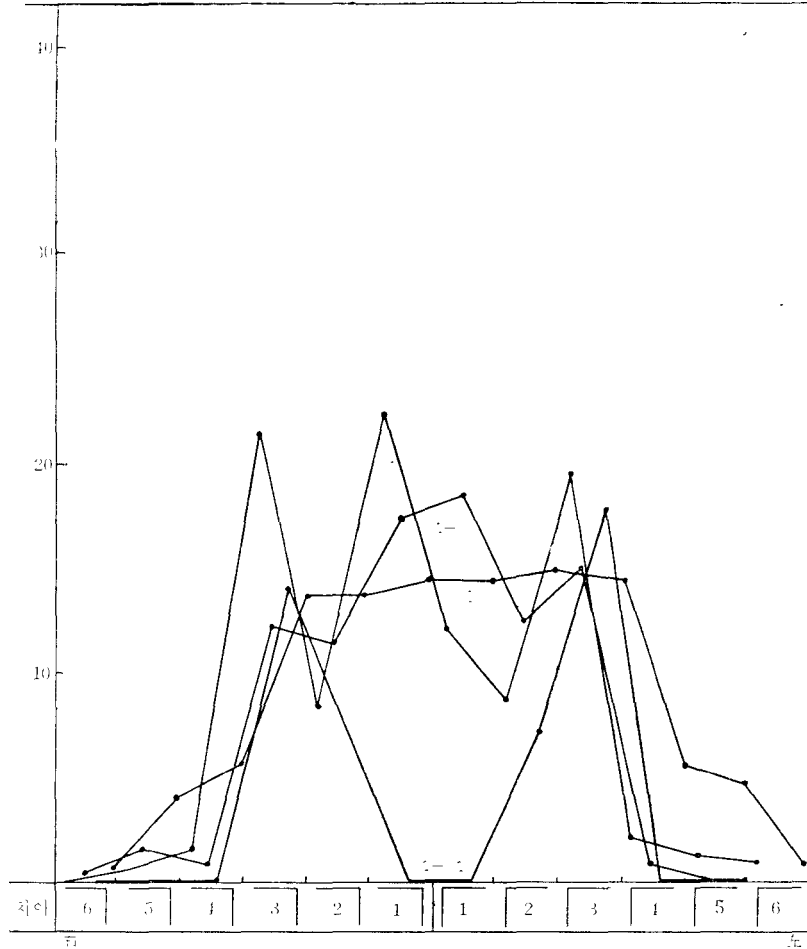


그림 4-2. 開咬 咬合 齒 (下顎)

上下顎 總 頻度는 10.7%였다.

(上顎, $X^2=296.5$ $df(11)$ $p<0.01$, 下顎, $X^2=220.4$ $df(11)$ $p<0.01$, 表14와 그림 5-1, 5-2 참조).

(6) 切端咬合齒(edge to edge bite teeth)의 上顎의 頻度는 下顎과 共히 總8.5%였다. 上顎에서 中切齒는 左側 11.5%, 右側 11.2%, 側切齒는 左側 12.2%, 右側 11.8%, 犬齒는 左側 8.7%, 右側 9.6%, 第一小白齒는 左側 7.0%, 右側 6.6%, 第二小白齒는 左側 7.2%, 右側 7.1%, 第一大臼齒는 左側 4.2%, 右側 5.0%였으며 二級二類에서는 切齒에서 全無하였다. 三級에서는 모든 齒牙가 他類形보다 頻度가 월등히 높았다.

下顎에서 中切齒는 左側 10.8% 右側 10.6%, 側切齒는 左側 11.0%, 右側 10.8%, 犬齒는 左側 10.6%, 右側

10.7%, 第一小白齒는 左側 6.7%, 右側 6.7%, 第二小白齒는 左側 7.8%, 右側 6.6%, 第一大臼齒는 左側 4.2%, 右側 5.0%였으며 二級二類의 切齒는 全無하였다. 反面 三級에서는 頻度가 높았다.

(上顎, $X^2=78.1$ $df(11)$ $p<0.01$, 下顎, $X^2=67.7$ $df(11)$ $p<0.01$, 表15와 그림 6-1, 6-2 참조).

IV. 總括 및 考按

齒科矯正學의 發達과 더불어 不正咬合의 社會的 關心度가 높아져가고 있으며 社會的으로 人口가 增加됨에 따라 不正咬合者의 數도 急增하고있다. 더욱이 口腔保

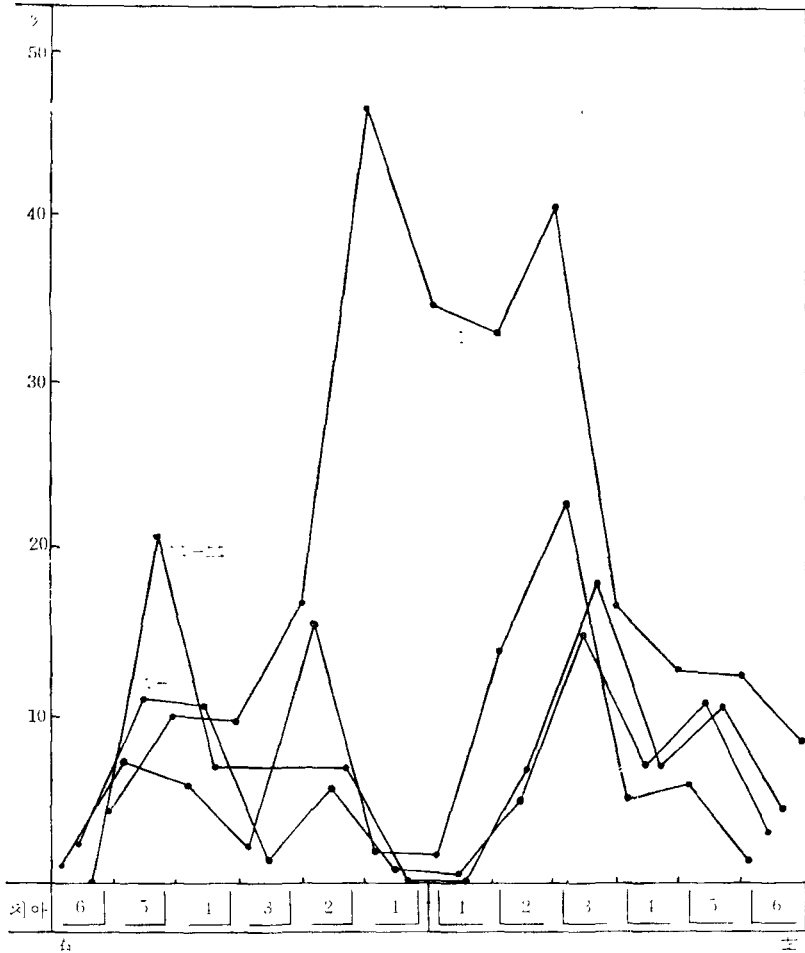


그림 5-1. 交叉咬合齒(上顎)

健의 重要한 疾病인 不正咬合의 治療對策도 切實히 要求되고있다. 그러므로 不正咬合의 齒牙不正樣相을 精密하게 分析 評價하고자 不正咬合者를 對象으로 不正咬合의 類形을 分類하고 各 類形別 齒牙不正樣相을 研究 觀察한 結果 本研究에서 觀察한 來院 不正咬合者中 女子가 男子보다 11.4%의 數가 많았다. 이는 不正咬合 發生頻度가 性的 差異가 比 審美的인 關心의 差異가 아닌가 思料된다.

Massler와 Frankel²⁵⁾이 Caucasian(14歲~18歲)을 對象으로 研究한 結果 不正咬合의 類形別 發生頻度는 一級不正咬合이 50.1%, 二級一類가 16.7%, 二級二類가 2.7%, 三級이 9.4%였으며 Altenuis²⁶⁾가 Negro(12歲~16歲)를 對象으로 研究한 結果는 一級不正咬合이 66.4%,

二級一類가 10.6%, 二級二類가 1.6%, 三級은 5.0%로서 이들은 各 類形間의 差는 있어도 順位는 같았다. 著者의 境遇도 類形間의 分布順位가 이들과 有似하고 類形間의 發生頻度差는 있었으나 研究方法의 相違와 人種差도 豫想되므로 이는 比較研究課題인것으로 思料된다.

徐³⁰⁾는 서울大學校 齒科大學 附屬病院 矯正科에 來院한 全不正咬合者를 對象으로 研究한 結果는 一級不正咬合이 51.1%, 二級一類는 20.0%, 二級二類는 3.3%, 三級은 25.6%로 三級이 二級一類보다 頻도가 높은것으로 나타났다. 著者의 研究結果와는 相反되나 研究對象과 方法이 달랐던 때문인것으로 思料된다.

비록 Angle氏 不正咬合 分類法이 臨床에서 廣範하게 利用되고 있으나 單純히 模型만으로 分類한다면가 口腔

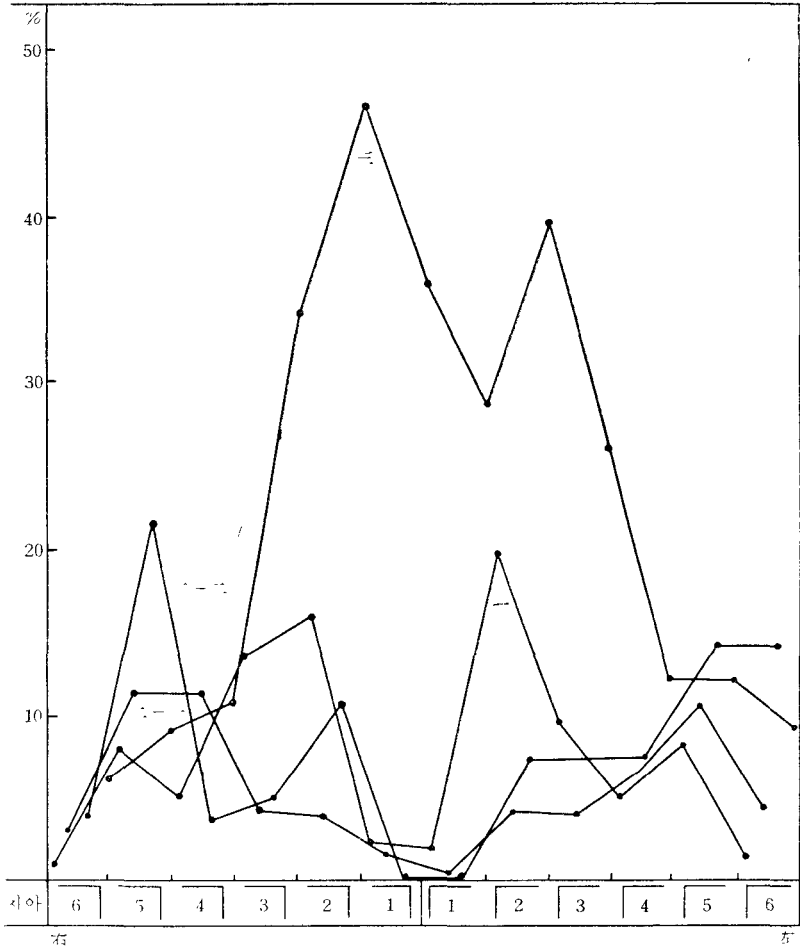


그림 5-2. 交叉 咬合 齒 (下 顎)

內 狀態만을 肉眼的으로 觀察하는에는 많은 誤差가 있을것으로 思料된다.

劉, 金, 李⁴³⁾의 不正咬合 頻度에 關한 研究에서 一級不正咬合의 齒牙群의 不正樣相은 叢生齒列 49.4%(男子 51.5% 女子 39.7%), 齒間離開는 22.9%(男子 22.6% 女子 24.5%), 交叉咬合은 40%(男子 3.2% 女子 7.6%), 開交咬合은 2.3%(男子 1.8% 女子 4.4%), 切端咬合은 8.7%(男子 7.2% 女子 15.8%)였다. 著者の 研究結果는 叢生齒列이 70.8%(男子 43.5% 女子 56.5%), 齒間離開는 21.0%(男子 31.8% 女子 68.2%), 交叉咬合은 9.5%(男子 50.0% 女子 50.0%), 開交咬合은 12.4%(男子 33.3% 女子 66.7%), 切端咬合은 13.0%(男子 39.0% 女子 61.0%)로서 이는 研究對象과 方法이 相異하므로

頻度の差가 서로 다르게 나타난것으로 思料된다.

正中離開는 不正咬合 500名을 對象으로 研究한 金⁴⁴⁾은 永久齒列에서 21.6%(男子 21.7% 女子 70.3%)의 頻度を 報告하였다. 이는 著者の 研究結果인 25.6%(男子 45.6% 女子 54.4%)와 有似한 分布였으며 男女間의 有意差는 認定할수 없었다.

個個齒牙의 不正樣相에 있어서 叢生齒, 回轉齒의 分布는 中切齒, 側切齒, 犬齒의 頻도가 높았고 小白齒, 大白齒의 頻度는 모든 類形에서 비슷하게 낮았다. 齒間離開齒는 上顎에서 二級一類不正咬合, 一級, 三級の 頻度는 높았으나 二級二類의 中切齒 側切齒 犬齒 小白齒의 頻度는 均一하였다. 下顎은 二級二類의 前齒는 높았으나 三級, 二級一類, 一級の 前齒部의 頻度는 有似한 樣相을 보

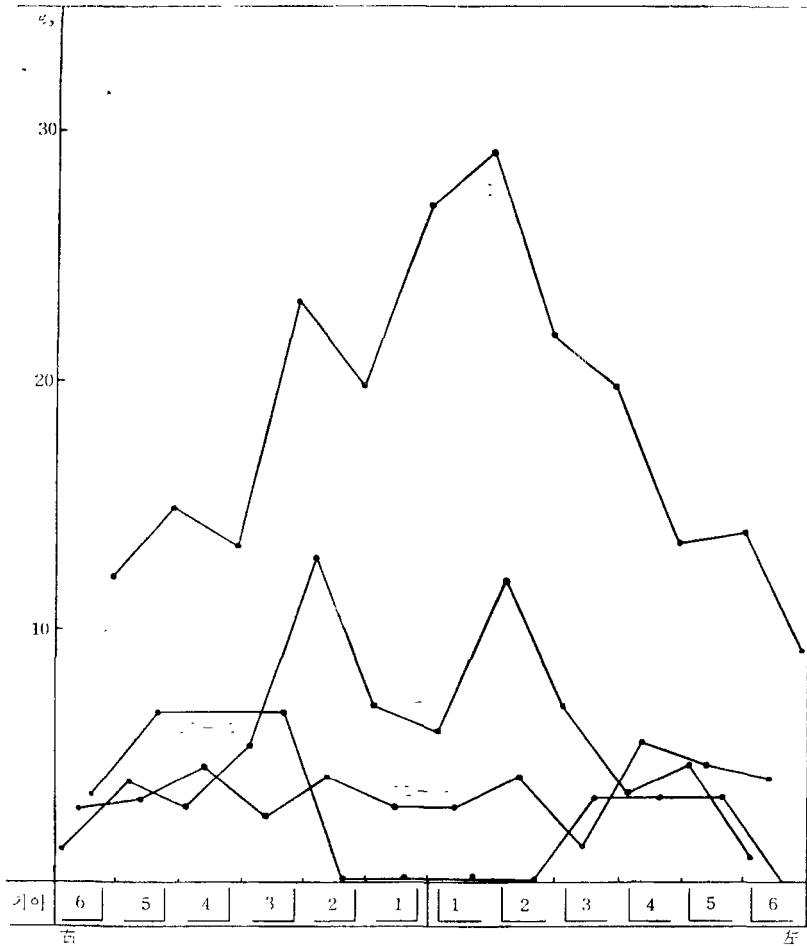


그림 6-1. 切端 咬合 齒 (上 顎)

었다. 切端咬合齒는 三級에서 上下顎 共히 높은 頻度를 보였으며 小臼齒와 大臼齒의 頻度는 他類形 齒牙의 最高頻度와 有似하였다. 交叉咬合齒는 三級에서는 中切齒와 側切齒의 頻度는 10%以上 45%로 높은 反面 他類形의 中切齒는 거의 5%以內였으며 小臼齒와 大臼齒의 頻度는 10%程度였다. 開咬咬合齒는 二級二類의 上下顎 中切齒는 全無하였고 一級, 二級一類, 三級の 中切齒 側切齒 犬齒의 頻度는 5%以內에서 類似하였다. 이와같은 不正咬合의 不正樣相을 研究함에 있어서 第一大臼齒까지로 制限한것은 研究對象中 第二大臼齒의 未萌出 例도 있었으며 矯正學에서 通常 第一大臼齒를 重要한 "Key tooth"로 指定하고 있기때문이었다.

個個齒牙의 不正樣相은 各項目에 重複되어 算出된 例

가 많았으며 이와같은 不正樣相은 不正咬合者의 疫學的인 例示가 될것으로 思料된다.

V. 結 論

第一大臼齒까지 咬合이 完成된 滿 十二歲以上の 不正咬合者 803名(男子 355名 女子 448名)을 對象으로 類形을 分類하고 齒牙不正樣相을 研究한 結果 다음과 같은 結論을 얻었다.

- (1) 不正咬合의 類形別 分布는 一級不正咬合이 39.2% (男子 42.2% 女子 57.8%), 二級一類不正咬合은 29.0% (男子 44.6% 女子 55.4%), 二級二類不正咬合은 3.5% (男子 46.4% 女子 53.6%), 三級不正咬合은 28.3%(男

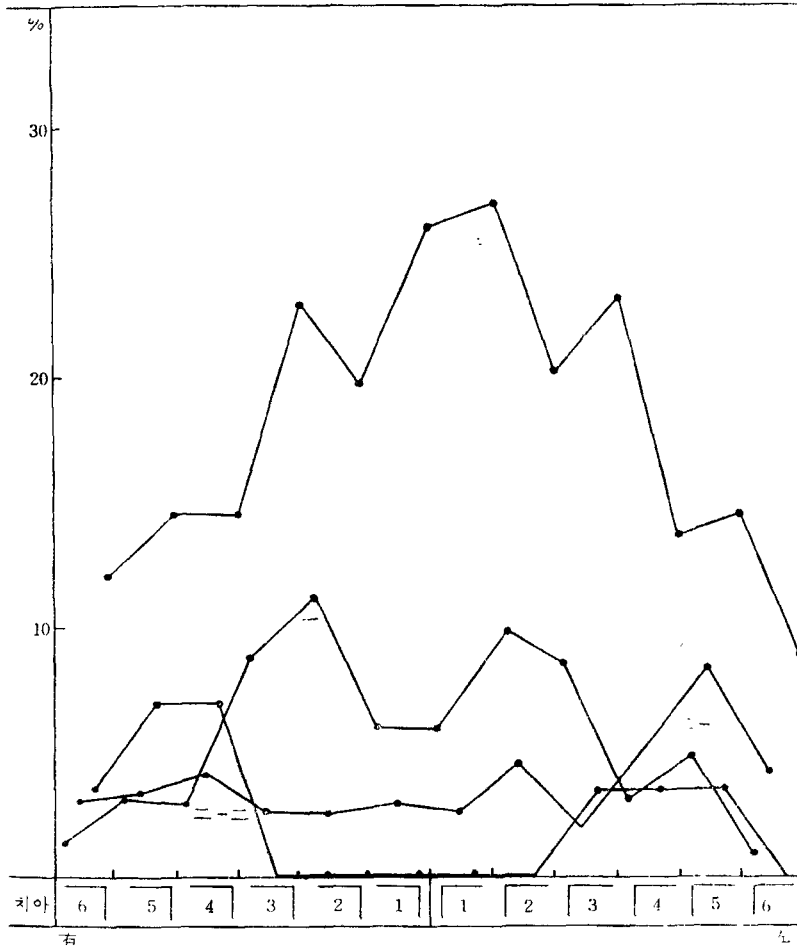


그림 6-2. 切端咬合齒(下顎)

子 46.3% 女子 53.7%)였다.

(2) 叢生齒列은全體不正咬合者의 67.8%(男子 45.0% 女子 55.0%)였으며 一級不正咬合에서는 70.8%(男子 43.5% 女子 56.5%)였고 大部分 前齒部 上下顎에서 높은 頻度를 보였으며 下顎보다 上顎의 頻도가 더 높았다.

(3) 正中離開는 25.6%(男子 45.6% 女子 54.4%)였으며 二級一類에서 28.8%(男子 46.3% 女子 53.7%)로 가장 높고 二級에서 19.8%(男子 46.7% 女子 53.3%)였다.

(4) 低位犬齒는 25.1%(男子 53.2% 女子 46.8%)였으며 右側은 男子 86.0%, 女子 76.6% 左側은 男子 73.0%, 女子 72.3%로 右側에 더 많고 二級二類에서 53.6%(男

子 46.7% 女子 53.3%)있으며 二級一類에서는 16.7%(男子 46.2% 女子 53.8%)였다.

(5) 過蓋咬合은 23.0%(男子 43.2% 女子 56.8%)의 頻度를 보였으며 二級二類에서는 89.3%(男子 48.0% 女子 52.0%), 二級一類는 54.5%(男子 40.9% 女子 59.1%)로서 二級の 特徵을 이루었으며 三級에서는 全無하였다.

(6) 齒間離開는 23.0%(男子 36.8% 女子 63.2%)였으며 二級一類에서는 26.1%(男子 44.3% 女子 55.7%)로 가장 頻도가 높았으며 二級二類에서는 7.1%(男子 50% 女子 50%)로 가장 낮았다. 大多數가 前齒部에서 나타났으며 前內部中에서 上顎은 男子가 92.6%, 女

자가 93.2%, 下顎은 男子가 48.5%, 女子가 53.2%였다.

(7) 開咬咬合은 14.3%(男子 42.6% 女子 57.4%)였으며 前齒部는 臼齒部보다 男子는 4배, 女子는 8배, 程度였으며 三級不正咬合에서는 17.6%(男子 50% 女子 50%)이며 二級二類는 全無하였다.

(8) 交叉咬合은 22.5%(男子 55.8% 女子 44.2%)였으며 男女 共히 前齒部가 臼齒部보다 約 2倍程度 頻도가 높았으며 三級에서는 55.1%(男子 57.6% 女子 42.4%)였다.

(9) 切端咬合은 20.4%(男子 47.6% 女子 52.4%)였으며 男女 共히 前齒部가 臼齒部보다 約 1.5倍程度이며 三級不正咬合에서는 43.2%(男子 53.1% 女子 46.9%)였다.

(10) 個個齒의 不正樣相은 叢生齒 21.5%(上顎 24.8% 下顎 18.1%), 回轉齒 20.8%(上顎 23.5% 下顎 18.0%), 交叉咬合齒 10.7%(上顎 10.6% 下顎 10.8%), 齒間離開齒 9.5%(上顎 11.8% 下顎 7.3%), 切端咬合齒 8.5%(上顎 8.5% 下顎 8.5%), 開咬咬合齒 8.1%(上顎 8.3% 下顎 7.8%)의 順位였고 叢生齒, 齒間離開齒, 回轉齒는 前齒(中切齒, 側切齒, 犬齒)의 關與도가 컸으며 開咬咬合齒는 各類形別로 差가 多樣했으며 交叉咬合齒와 切端咬合齒는 三級不正咬合에서 頻도가 컸으며 其他 類形에서는 散發的인 齒牙間의 差異를 보였다.

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A STUDY ON THE IRREGULARITIES OF TEETH IN MALOCCLUSION

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.....>> **Abstract** <<.....

The purpose of this study was to investigate the pattern of irregularities of teeth in various malocclusion groups. The subjects consist of 803 out-patients (355 males, and 448 females) in department of Orthodontics of S.N.U. Hospital, Yonsei University, and Kyunghi University Hospital.

The results were as follows.

1. The proportions of subjects on the basis of Angle's Classification were 39.2% (12.2% male, and 57.8% female) in class I malocclusion, 29.0% (44.6% male, and 55.4% female) in class II. div. 1., 3.5% (46.4% male, and 53.6% female) in class II. div. 2., 28.3% (46.3% male, and 53.7% female) in class III.
2. Considering all the subjects, the percentage of teeth crowding was 67.8% (45.0% male, and 55.0% female). In class I malocclusion, the percentage of Crowding was 70.8% (43.5% male, and 56.5% female) with higher frequency in upper anterior teeth than in lower anterior.
3. The percentage of Maxillary anterior diastema was 25.6% (45.6% male, and 51.4% female) on the whole. In class II. div. 1. malocclusion, the percentage was 28.8% (46.3% male, and 53.7% female) and in class III, the percentage was 19.8% (46.7% male, and 53.3% female). Thus, frequency of maxillary anterior distema, was comparatively higher in class II. div. 1. than in class III.
4. The percentage of high canine was 25.1% (53.2% male, and 46.8% female) on the whole, and was 86.0% male and 76.6% female in right side, 73.0% male and 72.3% female in left side.
In class II. div. 2., the percentage was 53.6% (46.7% male, and 53.3% female). In class II. div. 1., the percentage was 16.7% (46.2% male, and 53.8%) with higher frequency in class II. div. 2.
5. The percentage of deep overbite was 23.0% (43.2% male, and 56.8% female) on the whole. In class II. div. 2., and in class II. div. 1., its were 89.3% (48.0% male and 52.0% female), 54.5% (40.9% male, and 59.1% female) respectively.

This result can be considered as one of the characteristics of Angle's class II

malocclusion group.

6. The percentage of spacing was 23.0% (36.8% male, and 63.2% female) on the whole, In class II. div. 1., and in class II. div. 2., its were 26.1% (44.3% male, and 55.7% female), 7.1% (50.0% male, and 50.0% female) respectively.
7. The percentage of open bite was 14.3% (42.6% male, and 57.4% female) on the whole with higher rate on the anterior part. It rated 17.6% (50.0% male, and 50.0% female) in class III, but none in class II. div. 2.
8. The percentage of crossbite was 22.5% (55.8% male, and 44.2% female) on the whole, with higher frequency on the anterior part than on the posterior part. In Angle's class III, it rated as much as 55.1% (57.6% male, and 42.4% female).
9. The percentage of edge-to-edge bite was 20.4% (47.6% male, and 52.4% female) with higher frequency on anterior part than on posterior part.
10. The percentage of irregularities of teeth in various malocclusion groups, was 21.5% (24.8% maxillary, and 18.1% mandible) in crowding, 20.8% (23.5% maxillary, and 18.0% mandible) in rotation, 10.7% (10.6% maxillary, and 10.8% mandible) in cross bite, 9.5% (11.8% maxillary, and 7.3% mandible) in spacing, 8.5% (8.5% maxillary, and 8.5% mandible) in edge-to-edge bite, 8.1% (8.3% maxillary, 7.8% mandible) in open bite.

Crowding teeth, spacing teeth, and rotating teeh were more prevalent in anterior part than in posterior part. Cross bite teeth and edge-to-edge bite teeth were more prevalent in class III malocclusion than in another.
