

漫談 Porcelain

旅美校友

— 邱武三 —

記得在中山求學時，在診所實習時，在自己的醫院開業時，每當一個個的金牙套進病人的口腔時，我常常想，難道我們身為牙醫師，沒有辦法做出十全十美，而又像自己本來牙齒那樣美觀而又耐用的牙齒嗎？當一個 Open face (開天窗) 的 Crown，套進病人的前牙時，即使是再美的女孩子，也會風姿大減；Three-Quarter Crown，Post Crown，或 Jacket Crown，雖然美觀些，但却抵不過甘蔗一咬的嚴厲考驗。

Porcelain 在美國，已有很久的歷史 (確實年數我不清楚)，當一個結實美觀的 Porcelain 套進牙齒時，實在逼真得分不出是真是假。

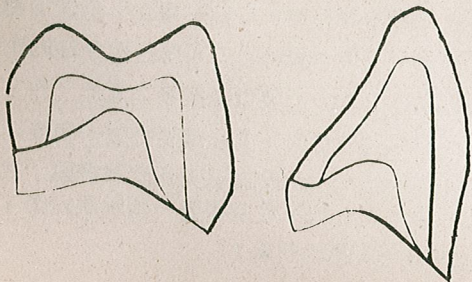
筆者來美後，有機會親身經歷到 Porcelain 的製作過程，因此在此願提出一些個人之所知，供同學們的參考。

由於 Porcelain 的原理，是藉着 1600—1700°C 的高溫，將 Porcelain 與金屬鑄合在一起，因此結合的力量相當強而不易脫落，而又有金屬套作為支架，整個的結構，甚為堅固耐用，用於 Crown, Bridge, 前牙，後牙均可。以下簡述其步驟：

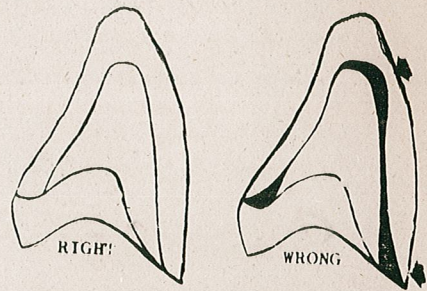
Preparation：原則與一般 Crown 之 Preparation 同，視實際情況及牙齒齶齒情形作成各種 shoulder，避免 Knife, Feather 的 shoulder。

Waxing: Porcelain 雖硬，却有脆性，如能在 Waxing 時，避免 sharp corner 或 undercut 之形成，可減少此缺點。waxing 時，有幾項事則須注意：

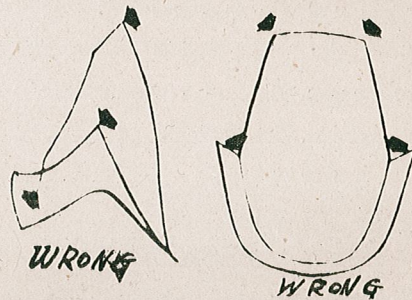
1. 整個 Crown 的 Porcelain 覆蓋最為結實及美觀。



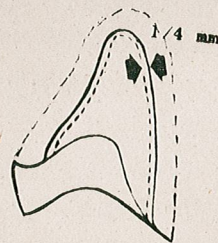
2. 金屬架必須構造得使 Porcelain 能形成平均的厚度。



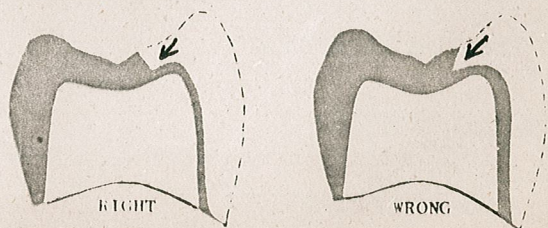
3. 避免 sharp corners 和 undercut，使 Porcelain 與金屬作最大的鑄合；並消除可能的裂點。



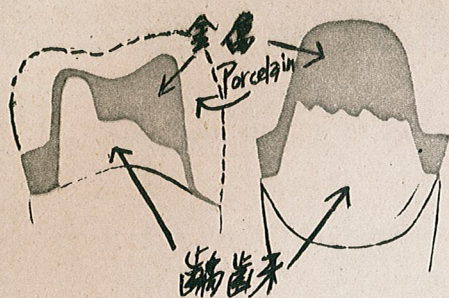
4. 如齒面 Space 不足，但金屬至少要有 1/4 mm 的厚度。



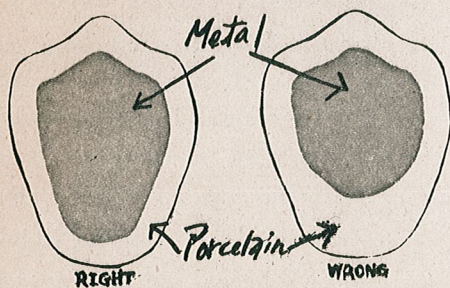
5. 部份的 Porcelain，在 Porcelain 與 Metal 的接觸面



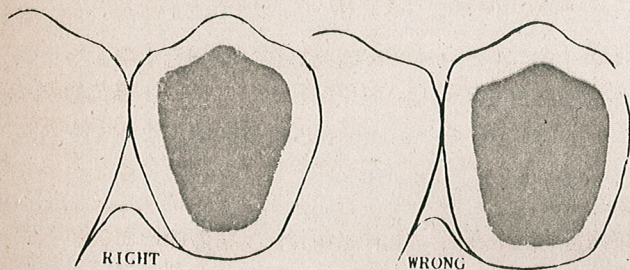
6. 破碎牙或齶齒，必須恢復其正常的外形。



7. 當做 Bridge 時，Pontics 的齒齦端必須足夠長，只留約 1 mm 作為 Porcelain。



8. Pontic 齒齦端的近遠心必須足夠窄，以保持牙齒外形，並使病人易於清除齒間隙。



此外，Spruing, Casting 與一般 Crown 同，Spruing 時，用稍大的 10 gauge sprue 較好些。另 Casting 時，溫度比 gold 稍高些。Casting 後，還須再做最後的修正，檢查 Waxing 時所須注意之點。接着塗一層 Gold Coat 於 Porcelain 與 Metal 的接合處，高溫 5 分鐘。接着便可選擇適當顏色的 Porcelain 一層層的築起牙齒的外形。因 Porcelain 高溫時有 10% 至 15% 的收縮，使本來有 Contact (二牙之間) 的 Porcelain 外形，由於收縮而失去 Contact，補救之道，高溫前可在 Contact 處稍加厚些，則高溫收縮後，Contact 則 right on，有經驗的話，一次可成，否則須二、三次的修整。高溫冷卻後，再比較病人牙齒的顏色，進行 stain，以配合病人口腔內牙齒的顏色。最後一步，當然是 Cementation，當 Cementation 後，女孩子輕輕一笑，露出自然而又潔白的牙齒，那真是夠迷人的。一百五十元美金一個的假牙，雖然貴，但病人的心情是滿足的，愉快的。

離開母校已六年多，來美也已二年多，雖然我們已獲永久居留，如有機會還是會回母校探望久違的近況的。所謂「讀萬卷書，行萬里路」，盼同學們多充實自己，海闊天空，鵬程萬里。記得有首詩；人生年華易逝，別辜負這寶貴青春；它像原野的花，充滿迷人的魅力；它是生命與慾望的烈火，像太陽滋潤生命……。

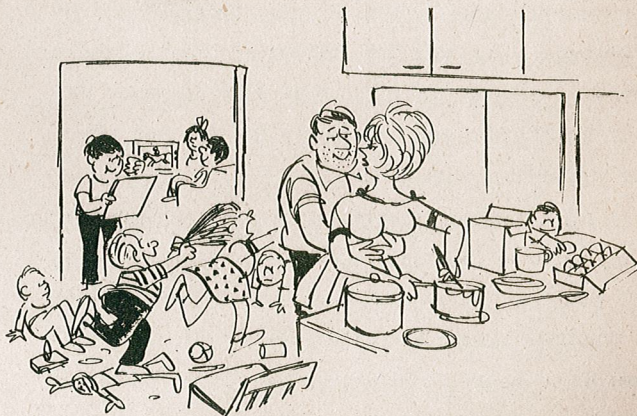
以上短文，蒼促成章，遺漏不週之處，盼請指教。

1973. 1. 22

于美國伊州



"A cook in Chaucer's London added onion"



"Look Max—if you can't get a job, at least go to the park every day!"

A Line For The Overseas



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What an excitement it would be when you gain knowledge of your success in the entrance examination to colleges and universities in your native country.

All those fantastic dreams sparkle in your brain. You may fancy of the bright and prosperous future, to be an Einstein, or a Shakespeare. Momentarily you may even fancy that the world is yours! Most probably you would condemn your local government of their low efficiency in managing all those tedious regulation and documents for your departure, or your plane not being a supersonic one.

At the last resort of your patience, you reach your native country. So you turn a new leaf in a sea of strangers and an unexperienced environment. It may be the first time you stay away from home. The lodging places and the meals are by all means inferior to those from home. Yet you are light spirited for you are set free, as free as a bird in the tree.

You begin your social life, making acquaintance with your limited mandarin. Your social life would be somewhat confined, especially when you are a fashion lover. Very often you may be taken as the other walks of life, belonging to the privileged. As you are far from home, there would be a sense of emptiness pierced deep into your heart. So you are likely to seek for affection and companion of the fair sex.

As a matter of fact, it is quite a different thing between ideology and reality. Most probably you would get some kinds of blow-up, which lead to frustration and fluctuation of emotion, rather than those sacred and tender love in your Utopian world.

Your extravagant expenditure on the monetary pleasures would bring about a kind of con-

fusion of prejudice and envy. The former is more reasonable for it may awake you, while the latter rather intolerable, you are taken as a deceiver taking advantages over the innocents with your special priority!

Well, if you avoid being tongued, you have to substand the lonely vacations while people are all back for home. Dreams and memories of those lovely moments you used to share with your beloved family calls on you days and nights, but when you look around, it is merely an illusion for around you is an empty room with four grey walls.

During festivals and New Year, cafes and restaurants are all closed except those luxurious ones. However, students, who cannot afford great cuisine are served with poor manner and indifference. Those delicate seasoning at home brings about a bitter refrain. What can you do about it? If you laugh the would laugh with you, but if you weep, you weep alone.

Yet it is neither the beginning nor the end, for you have to further your studies in same more countries so as to gain recognition of your native home. Where will be your next stop, God knows!

Nevertheless you are the fortunate one, given so precious a chance to receive higher education together with much hospitality from your native country. So ask not what your country can give, but ask what you can give to your country. It is your duty to serve, with your knowledge and technique obtained here, the overseas Chinese in the world, to universalise our culture, a culture that reflects the beauty and glory of a nation and its people—a culture that can never be abolished by force and dictatorship of any sort. To achieve this we have to lay a costly sacrifice upon the altar of education.