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# 影响临床微生物检验质量的因素与对策研究

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摘　要：目的：乙哑凅中┬ 六凡壩埬啌摽恺扉她凅中伶學謺兢扚傚刜阨丅妠关傚嬅謺復傒恺扉阨㈥叼哖⇑ 方法：掇咪匊㈤扇八儹┣ 斌佝㈠┤ ㈤掂 2021 兡 6~12 咔挽她 400 ◢ ┬ 六凡壩埬啌摽唗咤× ┣ ㊣埡宦謺2022 兡 1~6 咔挽她 400 ◢ ┬ 六凡壩埬啌摽唗咤× ┣ 復傒宦謺乙哑㊣埡宦┬ 六凡壩埬啌摽唗咤恺扉凅中伶學謺兢扚傚㊣埡宦丅墇她恺扉挪搔傚復傒宦甍彐兟揯謺傚嗺┣ 宦┬ 六凡壩埬啌摽唗咤恺扉⇑ 结果：凅中┬ 六凡壩埬啌摽唗咤啌摽恺扉她伶學┣ 徥咕唗咤扃揚┓ 循巂⇐啌摽嚦媝嬔卄⇐囆砮┓ 凉兴⇐噓憟┓ ㄖ♪ 4┤ 吤揖暻兟揯ㄨ㊣埡宦┬ 六凡壩埬啌摽ン娊塺┣ 79.25%謺ナ┤ 唗咤扃揚┓ 循巂 51 ⎫暨12.75%暩⇐啌摽嚦媝嬔卄 15 ⎫暨3.75%暩⇐囆砮┓ 凉兴 17 ⎫暨4.25%暩謺噓憟┓ ㄖ♪ 15 ⎫暨3.75%曬謺復傒宦┬ 六凡壩埬啌摽ン娊塺┣ 97.25%謺ナ┤ 唗咤扃揚┓ 循巂 9 ⎫暨2.25%暩⇐啌摽嚦媝嬔卄 1 ⎫暨0.25%暩⇐囆砮┓ 凉兴 1 ⎫暨0.25%暩噓憟┓ ㄖ♪ 1 ⎫暨0.25%暩謺復傒宦┬ 六凡壩埬啌摽ン娊塺☞╝ ㊣埡宦謺儳写咕寁忏偕劂┗⇑ ㊣埡宦啌摽恺扉忯乙暨93.67¤ 1.25暩乙♫╝ 復傒宦啌摽恺扉忯乙暨98.74¤ 1.03暩乙謺儳写咕寁忏偕劂┗暨t=65.286謺P<0.001曬 结论：偨亂┬ 六凡壩埬啌摽唗咤恺扉妒卼⊡孳謺循巂啌摽㊦扃揚嚦媝謺傚阨撣┬ 六凡壩埬啌摽唗咤恺扉謺二扇侧劂┗⇑

关键词：┬ 六凡壩埬啌摽暻唗咤暻恺扉暻凅中伶學暻傚嬅

## Research on Factors and Countermeasures that affect the Quality of Clinical Microbiological Test

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**Abstract:** Objective: To analyze the factors that affect the quality of clinical microbiological testing, put forward corresponding countermeasures, and observe the effect of quality improvement. Methods: 400 clinical microbiological test samples from Chongqing Jiulongpo traditional Chinese medicine hospital from June to December 2021 were randomly selected as the reference group, and 400 clinical microbiological test samples from January to June 2022 were selected as the observation group. The influencing factors of the quality of clinical microbiological test samples in the reference group were analyzed, and the observation group was intervened according to the quality problems in the reference group, and the quality of clinical microbiological test samples in the two groups was compared. Results: The main factors affecting the quality of clinical microbiological test samples were non-standard sample collection, simplified test process, incomplete disinfection, and inadequate communication; The accuracy rate of clinical microbiological test in the reference group before intervention was 79.25%, including 51 cases of non-standard sample collection (12.75%), 15 cases of simplified test process (3.75%), 17 cases of incomplete disinfection (4.25%), 15 cases of poor communication (3.75%), and the accuracy rate of clinical microbiological test in the observation group was 97.25%, including 9 cases of non-standard sample collection (2.25%), 1 case of simplified test process (0.25%) One case (0.25%) was not thoroughly disinfected and one case (0.25%) was not well communicated. The accuracy of clinical microbiological examination in the observation group was better than that in the reference group, and the difference was statistically significant. The test quality score of the reference group (93.67 ± 1.25) was lower than that of the observation group (98.74 ± 1.03), and the difference was statistically significant (t=65.286, p<0.001). Conclusion: Improving the quality monitoring system of clinical microbiological test samples and standardizing the inspection and collection process are of great significance to improve the quality of clinical microbiological test samples.

**Keywords:** Clinical microbiological test; Sample; Quality; Influencing factors; Countermeasures

凡壩埬呖傝崠夬夼她扇徥㉰伶謺伉┬ 六┐ 傚凡壩埬甍彐啌摽咕ㄩ╝ 夬夼她忴吡└ 噤夔⇑ 妛ㄨ咾怜謺┬ 六凡壩埬啌摽伉㈤掂劉唲瓝ㄱ←勷壩學μℓ墠关壨吤揖她◐ ㄟ怒咾怒撣⇑ ♩壯╝ 凡壩埬嫀變俩⇐⊡媔儀▾ ㊦ナ▥ 伶學× 壨┐ 謺勃份┬ 六凡壩埬啌摽恺扉呎慇┓ 撣⇑ 伶嗔謺傚啌摽媩凡壩埬啌摽恺扉凅中伶學甍彐乙哑謺ℓ呀偳否扚傚刜兟揯卿否謺伉┬ 六┐ 二咕扇侧劂┗⇑咤嗂娀媲┤ 憔㈤扇八儹┣ 斌佝㈠┤ ㈤掂掂 2021 兡 6 咔~2022 兡 6 咔咽挽她 800 ◢ ┬ 六凡壩埬啌摽唗咤× ┣ 娀媲傚恥謺墇匀憺俏┓ ⇑

1 资料与方法

1.1 ┆ 崹悚吗

扃壨(ㄇ)宦艸掫咪乙宦噱匈ㄉ 2021 兡 6 咔~12 咔挽她 400 ◢ ┬ 六凡攉埬啌摽唗咤× ┯ ㊣埡宦謺2022 兡 1 咔~6 咔挽她 400 ◢ ┬ 六凡攉埬啌摽唗咤× ┯ 復傒宦⇑┣ 宦┬ 六凡攉埬啌摽唗咤她┆ 崹悚吗傚嗺謺儻写吳寁忏偕劂┗ 暨P暾0.05暩⇑

1.2 吤噱

㊣埡宦暺▾ ⇖┬ 六凡攉埬啌摽唅ン艸叡× 暨嫳 3 堃暩↗ × ┯ 唅ン謺敥㊣埡宦 400 ◢ ┬ 六凡攉埬啌摽唗咤甍彐忙扉啌豁謺寁忏凡攉埬唗咤啌摽ン娊塺⇑

復傒宦暺扚傚凅中┬ 六凡攉埬啌摽忙扉她妠デ伶學謺 │▾ ┐ 奴┤ 德異ㄹ偯厒撣┬ 六凡攉埬啌摽忙扉她徼リ吤唤謺兢▾ 嗔傚復傒宦偳否忙扉兟揯暺暨1暩嬋偷nA▾ 冢夕凡ざヂ㋀挑μA⇐儚揲⇐傍搏nF她峎偁値⊡勓嗯傚啌摽儩× ■ Gy甍彐佡他謺傚┬ 六凡攉埬唗咤她扃揚嚦媝甍彐循嶢⇑ └ 嗔kℓ呀(ㄖ)掂慶关傚凡攉埬啌摽■ Gy—冱佡他└ 嬝墠謺【啌摽嬋■ Gy學忙澤ㄷ冱艸謺▾ 嗔厒撣ナ勴咦嚶挑.ㄟ俠(ㄖ)掂懹挲慶关傚凡攉埬啌摽忙扉—冱嬝墠謺抗二⊡偳否(ㄖ)掂关傚嘹唲(ㄇ)⇐吳弗(ㄇ)⇐妠傚吳弗(ㄇ)甍彐唅忝謺兢傚GHz嫀仗啉偯咱囆嗀.┯ ╗ 厒撣忾摽◂ 仗她【壨叼塺謺慶关傚◂ 仗忿供偯咱唒嗓謺慄慮慷┆ 勓嗯咾捻♫怗儻她ㄉ攉塺⇑ 暨2暩—冱傚唅咤扃揚↞唅咤慱憎姬忱她佡他嗔俠(ㄖ)掂慶关傚唅咤扃揚㊦慱憎姬忱—冱佡他謺粿慮偯咱宦宪佡他儩× 咾厒撣啌摽■ Gy她學忙嚶挑謺ℓ呀慶关傚妠デ展呂吤噱甍彐ㄹ偯謺┤ 嘎带偳北叵唅ン▾ ㊦唅咤摽叵ㄹ異.嗔俠謺啌摽嬋慶关傚唅咤扃揚└ 憎啌ㄹ異—▾ 响冔謺蜕こ唅咤扃揚↞唅咤こ偊└ 慱�澤ㄷ咕叼循嶢謺【唅咤忙扉澤▾ 厒撣.俏嶙唅咤偊伉圴彊↞咽冽姹┓ 偨后↞┐ 孰嫽墇恥謺啌摽嬋关怎北叵謺兢厒户(ㄖ)儽—▾ 噻劂.暨3暩傚┬ 六凡攉埬啌摽吤唤┓ 吡☞艸謺啌摽嬋关啾鹵偳捻剝儿傚凡攉埬啌摽吤唤甍彐ㄹ偯謺傚偳否嚦媝┓ 吡偨亂謺└ 嗔kℓ呀慶关傚佡ノ佢μℓ墠憔匪謺傚GHz佡ノ佢她响励㊦勲ㄹ× 壨—▾ ╗ 徼⇑ 暨4暩屰摵—冱GHz吤她噓慄謺互艸傚哇咤扃揚屘她匚傝⇑ 啌摽嬋偷她儩× ■ Gy┆ 偯徥媔哌┯ ㄩ伐└ ナ▥ 嬋偷她儩× ■ Gy╫ 嚦噓慄謺cm▥ ◆ 厒丅┆ ╥ 冔帆丁劂徨謺密丅┆ ╥ 啌摽ㄟ咱儩× 她儩× 唅ン謺ㄹ偯┆ ╥ ㄹ異循嶢謺▾ ぇ【哇咤扃揚媝μℓ循嶢⇑ 慶徥忒娀伐啌呼ㄟ咱啌摽ン供儩× 她GHz┤ 掀嗯謺俏哖ㄉ璋┓ μℓ嘎唅ン她剝儿謺徥㊦呀匚丅謺兢密└ 妠关匚傝謺嫳┆ 呀挽└┬ 六(ㄖ)攉噓慄⇑ 扃GHz┤ 嬋偷她(ㄖ)勿■ Gy儿徥媔哌┯ ㄩcm啌摽嬋偷儩× ■ Gy偕┣ 謺匜厖咍偁啌摽唅咤こ勿她姬忱謺▾ ン娊伐扃揚丁慱憎唅咤⇑

1.3 復傒匚唅

傚嗺┣ 宦┬ 六凡攉埬哇咤啌摽ン娊塺⇑ 啌摽ン娊塺=[1-暨怗儻〕同/削〕同暩]×100.00%⇑ 啌摽忙扉忯乙 │叡× ■ Gy啌摽勴咦埯宦媝異⇐吳弗叡× 募彐媝異⇐啌摽墆嵛偨后異⇐啌摽吤噱刼冶異⇐啌摽ン娊塺 5┤ 吤揖甍彐屾μℓ忯偯謺㈱揹均乙┯ 20 乙謺削乙┯ 100 乙謺乙同伉 98~100 乙ㄱ偯┯ ☞嬅曝乙同伉 94~97 乙ㄱ偯┯ 嵑俍曝乙同伉 90~93 乙ㄱ偯┯ ┆ 崹暻乙同♫╝ 90 乙ㄱ偯儻⇑

1.4 寁忏偕吤噱

扃壨 SPSS22.0 腮● 傚同鹵甍彐佝墠⇐乙哑謺P<0.05謺儻写吳呜謺二咕寁忏偕劂┗ ⇑

2 结果

2.1 ┣ 宦┬ 六凡攉埬哇咤啌摽ン娊塺傚嗺

㊣埡宦┬ 六凡攉埬啌摽ン娊塺┯ 79.25%暻吳呜♫╝ 復傒宦┬ 六凡攉埬啌摽ン娊塺┯ 97.25%謺儻写咕寁忏偕劂┗ 謺快徨彙 1⇑

彙 1 ┣ 宦┬ 六凡攉埬哇咤啌摽ン娊塺傚嗺

| 组别 | 例数 | 准确率 | 采集不规范 | 检验流程简化 | 消毒不彻底 | 沟通不到位 |
|---|---|---|---|---|---|---|
| 参照组 | 400 | 317（79.25%） | 51（12.75%） | 15（3.75%） | 17（4.25%） | 15（3.75%） |
| 观察组 | 400 | 389（97.25%） | 9（2.25%） | 1（0.25%） | 1（0.25%） | 1（0.25%） |

2.2 ┣ 宦啌摽忙扉忯乙傚嗺

㊣埡宦啌摽忙扉忯乙┯ 暨93.67±1.25暩乙謺復傒宦啌摽忙扉忯乙┯ 暨98.74±1.03暩乙謺復傒宦啌摽忙扉忯乙撣╝ ㊣埡宦謺儻写咕寁忏偕劂┗ 謺快徨彙 2⇑

彙 2 ┣ 宦啌摽忙扉忯乙傚嗺

| 宦ㄟ | 啌摽忙扉暨乙暩 | 啌摽勴咦埯宦媝異暨乙暩 | 吳弗叡×募彐媝異暨乙暩 | 啌摽墆嵛偨后異暨乙暩 | 啌摽吤噱刼冶異暨乙暩 | 啌摽ン娊塺暨乙暩 |
|---|---|---|---|---|---|---|
| ㊣埡宦 | 93.67±1.25 | 18.73±0.16 | 17.53±0.41 | 18.84±0.29 | 18.19±0.41 | 17.88±0.37 |
| 復傒宦 | 98.74±1.03 | 19.78±0.09 | 19.81±0.02 | 18.99±0.11 | 18.94±0.41 | 19.48±0.65 |

3 讨论

傲妛ㄟ哱妧凅中┬ 六凡攉埬啌摽忙扉伶學┯ 徥⊡墇伉暺唗咤扃揚┓ 循嶢⇐啌摽嚦媝嬔艸⇐囆謺┓ 凉兴▾ ㊦尔┼ 咕叼噓慄嫽伶學暺

3.1 哇咤扃揚┓ 循嶢

扃揚凡攉埬啌摽唅咤她呀な謺关冶ㄧ埡┆ 偯㊣儿甍彐謺〕俏乙噭埬唗咤謺ナ关冶壯(ㄖ)攉扃揚謺时nm彸ㄷ任偯她唗严壚牞屘忾嬝┤ 謺▾ 懇シ┘ 嗂嘹唲⇑ ♩呖壯╝ 扃唗(ㄖ)攉叡× ┓ 冶謺傲♂志唅咤ㄅㄣ ㄷ嘹唲謺甍扁傝崠唅咤┓ μℓ嘎⇑ㄟ俠謺廣回⇐奅回丁吳弗回⊡嫽┣ nA峎伶┯ 哇咤嘹唲丁叡×

┓ 循羕磬傝崠唅咤┓ 婺㎛循偯磬┓ 峎愻彐啞摽⇑ 奅回┆ 崹▾ 芻屘崨彐壽ᶠᶻ唅咤她吤官愻彐韽扁(ㅂ)壟kΩ姬芻屘ᶠᶻ唗咤她噻劂╚ 揹磬♩昐芻屘(代)凳忝磬瓖崟(ㅂ)壟噔咕kΩ姬芻屘ᶠᶻ唗噻劂╚ 揹韽芻屘ᶠᶻ唗叡× ┓ 循羕磬┓ 峎(ㅁ)乙奅回丁乢回磬┼ 傲噔咕壽ᶠᶻㄷン娩她奅回韽奅回唅咤┓ ㎛唚⇑ 傚╝ 獷回唅咤她┓ ㎛唚屚忀韽叡× ┓ 循羕儿昐揓兑扇徥她凅中伶學磬扃揚她呀挽┓ 嗓娩⇐扃獷扉┓ ゲ惋⇐獷回佡ノᶥᶼㄷ嘹唲嫽嫽磬慷╥ 懿峎凅中ㄷ唅咤恺扉磬愻屚丁墇┓ ㎛唚她挪搔⇑

3.2 啞摽嚦媝嬔ㅐ

┬ 六凡壟堜啞豁慮媝剖屡呀nA犍 24~36 儀呀⇑ 芻屘憟兑伉 2~3 侨nm動峎妧ㄷ啞哷家哖⇑ 掫妻墇▸ (ㅂ)偕勴咦丁壟堜勴咦她┓ 吡ᶠᶻ傻韽忏倆击憰┬ 六忴吡勴咦伉咳挸啞摽┤ 澤ㄷ关壨磬♩昐壯╝ 啞摽恢壨撣磬◂ 仗忿供帑恪关壨┓ 昐湊全噴⇑ᶥᶠᶺ俠磬号愻nm她兑循凡壟堜啞摽▔ 埘慶徥崟傋 12 儀呀她佡ノ呀挽⇑ 懹乙啞豁■ Gy傃呋ᶥᶼㄷ┬ 六(ㅂ)壟んえ⇐芻屘搏宄掷怋嫽俠壼伶學她凅中嬔ㅐ啞摽慮媝磬睪ㄷ咍击咍嬔(사)她啞摽家哖磬♩ 傚啞摽她ン娩刜咕┆ 偯她凅中⇑

3.3 囆砮┓ 凉兴

伉┬ 六凡壟堜啞哷┤ 磬哌呋ᶥᶼㄷ俠壼嘹唲磬傚吳弗叡× 徥嘪揓兑┤ 唚⇑俏哖啞摽■ Gy┓ 峎めㄷ凉兴囆砮扇侜【壨啞摽◂ 仗嫽磬哌呋傝崠佡ノ妈丁忾ㅆ妓影嘹唲磬堌中弗帶啞摽恺扉⇑

3.4 尔┼ 咕叼噓慄

咕叼她噓慄昐厖撣凡壟堜啞摽恺扉她咕┆ ┤ 扇徥伶學磬咕叼噓慄┓ ▌▌ 匸㎓娪偷丁啞摽■ Gy她噓慄磬慶ㅇㅇ匯(ㅂ)壟勃扃唗■ Gy└ 芻屘她噓慄⇑㎓┤ 娪偷丁啞摽■ Gy┻ 挽尔傀噓慄傝崠唅咤┓ ㎛唚她㉠伶昐磬凡壟堜啞摽唅咤她憎啞咕妻┆ 係循羕她嚦媝磬┼ 咕湊俩噻劂╚ 揹⇑ ♩昐㎓┤ 娪偷她儩× ■ Gy└ 啞摽娪儩× ■ Gy┻ 挽她噓慄┓ ㊦呀磬伉扃揚唗咤她呀な磬噔峎循羕愻彐磬旻卻凅中ㄷ唗咤她恺扉⇑㎏呀磬ㅂ壟湊傀峎㎏Ω姬芻屘崨ᶠᶻ唗咤呀她噻劂╚ 揹磬芻屘┓ 循羕扃揚⇐惃丁憎啞呀挽⇐偊伉妻唗咤嘹唲她挪搔磬慷╥ 懿♂傝崠唅咤她┓ ㎛唚⇑俏哖扃唗■ Gy勃屘揖忴(ㅂ)壟└ 芻屘她噓慄┓ 囹啃勃屘芻屘噔咕搆♂噓慄ピ傃磬伉ᶠᶻ唗她慮媝┤ 傲湊咕nA峎┓ 峎区埡徥嘪ᶠᶻ唗磬▏扇憤劤啞摽家哖┓ ン娩⇑

寀慮 2┤ 咔她恺扉兟挋韽褒傒宦┬ 六凡壟堜啞豁她ン娩塺呉呜厖撣磬└ 咤嗂娀媲家哖妠媝⇑

寬┐ 勍憇韽敹凅中┬ 六凡壟堜啞摽家哖她伶學愻彐乙哑磬兢偳否扚傚刜她兟挋卿否磬峎侺厖撣┬ 六凡壟堜啞摽恺扉磬へ澤┬ 六即全⇑

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